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ABSTRACT

The self-perceived teaching effectiveness of female and male vocational agriculture/agribusiness teachers in the United States was studied. The population for the study consisted of all female teachers of vocational agriculture/agribusiness in the United States (325) and an equal number of randomly selected male teachers of vocational agriculture/agribusiness. The data were collected with a mailed questionnaire. Along with the biographical and professional information, the instrument assessed the self-perceived teaching effectiveness of the respondents on thirty-nine commonly performed competencies in the following areas: program planning, classroom and laboratory instruction, Future Farmers of America (FFA), supervised occupational experience programs, adult education, and public relations, advisory committees, and professionalism. Based on the findings, it was concluded that (1) females do perceive themselves to be effective as teachers; (2) the self-perceptions of the effectiveness of female and male teachers are not significantly different (at the .05 level) for a majority of the competencies commonly performed by teachers of vocational agriculture/agribusiness; (3) over half of the commonly performed competencies in which females rated themselves significantly lower were in the competency area of FFA, and (4) in states where females are employed as teachers of vocational agriculture/agribusiness, they are generally teaching horticulture, whereas the male teachers are generally teaching basic vocational agriculture/agribusiness and production agriculture. (Author/JH)

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A STUDY OF THE SELF-PERCEIVED TEACHING EFFECTIVENESS OF FEMALE AND MALE VOCATIONAL AGRICULTURE/AGRIBUSINESS TEACHERS IN THE UNITED STATES

By

Susan Fayette Moore

A Thesis
Submitted to the Faculty of
Mississippi State University
in Partial Fulfillment of the Requirements
for the Degree of Master of Science
in the Department of Agricultural and Extension Education

Mississippi State, Mississippi

August, 1978

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S. F. M.

ABSTRACT

Susan Fayette Moore, Master of Science, 1978

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ABSTRACT

The overall purpose of the study was to determine and compare the self-perceived teaching effectiveness between female and male vocational agriculture/agribusiness teachers in the United States.

The population for the study consisted of all female teachers of vocational agriculture/agribusiness in the United States (325 female teachers) and an equal number of randomly selected male teachers of vocational agriculture/agribusiness, or a total of 650 teachers. Returns were received from 216, or 66.5 percent, of the females and 217, or 66.8 percent, of the males for a total of 433, or 66.6 percent. The data were collected with a mailed questionnaire. Along with the biographical and professional information, the instrument assessed the self-perceived teaching effectiveness of the respondents on 39 commonly performed competencies in the following areas: program planning, classroom and laboratory instruction, FFA, supervised occupational experience programs, adult education, and public relations, advisory committees, and professionalism. Statistical techniques used in analyzing the data included frequencies, central tendencies, and analysis of variance.

Based on this study, it was concluded that:

1. Females do perceive themselves to be effective as teachers of vocational agriculture/agribusiness.
2. The self-perceptions of the effectiveness of female and male teachers of vocational agriculture/agribusiness are not significantly different at the .05 level for a majority of the competencies commonly performed by teachers of vocational agriculture/agribusiness.
3. Over half of the commonly performed competencies in which females rated themselves significantly lower were in the competency area of FFA.
4. In states where females are employed as teachers of vocational agriculture/agribusiness, they are generally teaching horticulture, whereas the male teachers are generally teaching basic vocational agriculture/agribusiness and production agriculture.
5. Past enrollment in vocational agriculture/agribusiness and FFA does help in performing many competencies in the area of FFA.

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CHAPTER I

INTRODUCTION

The decade of the seventies has witnessed a series of gradual but definitely apparent changes in the American way of life. Although these changes may not be as drastic and forceful as the American Revolution or the Industrial Revolution, or even the racial movement in more recent times, they have continued to focus on the civil rights of citizens. The labor force in the United States is where one of the more spectacular changes has taken place. More women are working outside the home, and many are in non-traditional jobs. The media have flashed the reality of women in professional occupations as engineers, lawyers, physicians, and in occupations on the non-professional level, such as welders, automobile mechanics, truck drivers, and plumbers.

However, little has been said about women in agriculture, particularly, those women employed in the male-dominated field of teaching vocational agriculture/agribusiness.

Statement of the Problem

There have been few studies made concerning the effectiveness of female vocational agriculture/agribusiness teachers. How do they perceive their effectiveness in a traditionally male-oriented profession? How do their perceptions of themselves as vocational agriculture/agribusiness teachers compare to the perceptions male vocational agriculture/agribusiness teachers have of themselves? Stated another way, the problem was to determine and compare the self-perceived teaching effectiveness of female and male vocational agriculture/agribusiness teachers in secondary schools in states where females are employed.

Significance of the Study

The importance of determining the self-perceived teaching effectiveness of both male and female vocational agriculture/agribusiness teachers can be substantiated by the need for more teachers and the changes taking place in agricultural education today.

There has been a shortage of vocational agriculture/agribusiness teachers for the last thirteen years. This situation has been documented each year since 1965 by the National Study of the Supply and Demand for Teachers of Vocational Agriculture, originally initiated by Ralph J. Wooden at The Ohio State University. Since 1974, the study has been continued by David G. Craig at The University of Tennessee (Craig, 1977). According to the 1978 National Study of Supply and Demand for Teachers of Vocational Agriculture, a total of 12,694 positions were available in 1977. The findings further showed that 221 teachers were needed but unavailable on September 1, 1977, and that 90 departments did not operate during the 1977-78 school year because of the teacher shortage (Craig, 1978). Women may be able to help fill this gap by becoming teachers of vocational agriculture/agribusiness.

Craig (1978) also reported a total of 305 new positions added during the 1976-77 school year. These new positions can largely be due to the specialization taking place in the agriculture/agribusiness programs and the expansion into the lower grades with career exploration and awareness programs. New positions such as these provide prime opportunities for women to enter into the field of vocational agriculture/agribusiness education.

Although many positions and opportunities are available in teaching vocational agriculture/agribusiness, the researcher has often heard that women do not have the needed background experience in vocational agriculture/agribusiness to do the job. They were never enrolled in vocational agriculture/agribusiness classes nor in the FFA when in high school, and they do not have the work experience in agriculture that is required of a vocational agriculture/agribusiness teacher. It is true that at one time the qualities of practical experience were essential to becoming a vocational agriculture/agribusiness teacher. As stated by Smith (1929, p. 137) in 1929:

> Qualities of the teacher must be supplemented with actual farm experience. It will be impossible for the teacher to guide intelligently his pupils in the study of their problems unless he has gone through experiences like or similar to those through which he attempts to lead his boys. Not only must he have resided on a farm, but he must have had a sufficient amount and kind of real practical experience on a farm to enable him to share in the experiences of the boys as they proceed under his guidance from month to month.

In recent years, however, both male and female students in vocational agriculture/agribusiness education and newly employed teachers of vocational agriculture/agribusiness often do not have the work experience or background once required. Newcomb (1976) reported that only about 30 percent of the preservice teachers enrolled in agricultural education courses at The Ohio State University were former students of vocational agriculture/agribusiness and/or had work experience in the area of agriculture. The students also had not lived on farms or worked in other areas of the agricultural industry.

The vocational agriculture/agribusiness program is changing. In the past, many schools would not allow girls to enroll in vocational agriculture/agribusiness or join the FFA until Title IX of the Education Amendments of 1972 was enacted. This law states:

> No person in the United States shall, on the basis of sex, be excluded from participating in, be denied the benefits of or be subjected to discrimination under any education program or excluded from actively receiving Federal financial assistance.
> (Public Law 92-318, Section 901)

Further guidelines were constituted from the U. S. Department of Health, Education, and Welfare which prohibit sex-segregated courses, such as homemaking and vocational agriculture/agribusiness. Public schools had until Fall, 1975, to implement the changes (Steele, 1974).

Therefore, at least today, many prospective female students in agricultural education will have had an equal opportunity to gain experience through participating in high school vocational agriculture/agribusiness courses and the FFA. Also, many are gaining practical work experience in farming, agribusiness, horticultural operations, and/or other areas that are helpful, if not still essential, for today's vocational agriculture/agribusiness teacher.

With these distinct differences in background, work experience, and sex of vocational agriculture/agribusiness teachers today, how effective do they feel they are? Taking into consideration the above constituents, plus the fact that approximately 2.6 percent of the present vocational agriculture/agribusiness teachers in the United States are females, very few studies have been made dealing with the effectiveness of females as vocational agriculture/agribusiness teachers. The studies which have been made were confined to individual states and, thus, very few females were included. Furthermore, few studies have been made of self-perceived effectiveness of teachers of vocational agriculture/agribusiness.

For these reasons, this study was concerned with determining and comparing the self-perceived teaching effectiveness of all identified female vocational agriculture/agribusiness teachers and a sample of male vocational agriculture/agribusiness teachers in the United States. It is further intended to point out significant biographical and geographical findings of those teachers studied, some of which may be related to the low percentage of female vocational agriculture/agribusiness teachers.

Definitions

The following definitions are offered to clarify terms used in the study:

Secondary schools--Public schools beyond the elementary grade level, including grades seven through twelve and often known as high schools.

Teacher effectiveness--The degree of success to which a teacher performs the specified duties as demanded by the nature of his/her position.

Vocational agriculture/agribusiness--A group of related courses of subject matter and practical experiences of which the purpose is to develop competencies needed to enter and advance in agricultural occupations of less than a B.S. degree level. The courses may include instruction in the following areas: agricultural mechanics; agricultural products, processing, and marketing; agricultural supplies and services; forestry; horticulture; production agriculture; renewable natural resources; and other agriculture.

Objectives of the Study

The main objective of the study was to determine and compare the self-perceived teaching effectiveness of female and male teachers of vocational agriculture/agribusiness. Other objectives were:

1. To compare the self-perceived teaching effectiveness of female and male vocational agriculture/agribusiness teachers with the educational level of the teachers.
2. To compare the self-perceived teaching effectiveness of female and male vocational agriculture/agribusiness teachers who themselves were enrolled in vocational agriculture/agribusiness and the FFA in high school with those who were not.
3. To determine the number of years female and male vocational agriculture/agribusiness teachers have taught vocational agriculture/agribusiness.
4. To determine the areas of vocational agriculture/agribusiness taught and at what grade levels by female and male teachers.
5. To determine the department size in which female and male vocational agriculture/agribusiness teachers are teaching and whether or not they are the department head (chairperson).

6. To determine selected biographical and geographical information of the sampled female and male vocational agriculture/agribusiness teachers.

Research Question

The question to be answered is: Is there a difference between how female and male vocational agriculture/agribusiness teachers perceive their effectiveness as teachers?

Assumptions

This study will be based on the following assumptions:

1. The information provided by the respondents will be truthful and honest.
2. The data will not be subjected to intentional bias.
3. The competencies are correctly categorized according to the competency areas.

Limitations

The findings of this study are limited to the population of vocational agriculture/agribusiness teachers in secondary schools in those states in the United States where female vocational agriculture/agribusiness teachers are employed.

CHAPTER II

REVIEW OF LITERATURE

The primary objective of this chapter is to present a review of selected literature relating to the study. An extensive review of literature revealed that there are very few studies concerning the effectiveness of female vocational agriculture/agribusiness teachers and no studies concerning the self-perceived teaching effectiveness of females as teachers of vocational agriculture/agribusiness. Much information, however, concerning women in the labor force and the sex stereotyping of occupations was located.

For the purpose of organization, the review of literature has been divided into the following categories: (1) Women Workers, (2) Trend of Females in Vocational Education, (3) Females in Vocational Agriculture/Agribusiness, and (4) Summary.

Women Workers

This section describes the number of women working, the number of years of education women are receiving, the areas of education in which women are concentrated, and the occupations in which women are employed. The statistical information is presented to show the changing trend over the past ten to twenty years of women in the work force and to emphasize the still existent sex stereotyping in many occupations. Special attention is directed to the fields of education, particularly agricultural education.

Trend of Participation of Women in the Labor Force

Today one of the more predominant changes in the American economy is the drastic increase of women working for pay. In 1900, women accounted for only 18.1 percent of the nation's work force and in 1920 only 20 percent (Steiger and Cooper, 1975, p. 15). By 1974, according to the U. S. Department of Labor, 36 million women were in the labor force, which is 46 percent of all women 16 years of age and older. Overall that year, women represented 39 percent of the total civilian labor force. The number of women working has increased by nearly two-fifths between 1964 and 1974, and has more than doubled since 1960 (1975 Handbook on Women Workers, 1975, p. 7). Two years later, in 1976, 39.6 million women held jobs or were looking for jobs, which accounted for 48 percent of all women in the nation. The female labor force increased 1.6 million during 1975-76 (Ruby, Joyce, Graustark, and Sciolino, 1976, p. 68) to comprise 40.7 percent of the national work force (Rieder, 1977, p. 1). Furthermore, 90 percent of all women work at some time in their lives outside the home (Steiger and Cooper, 1975, p. 29).

Education of Women Workers

"The more education a woman has received, the more likely she will be engaged in paid employment" (1975 Handbook on Women Workers, 1975, p. 181). For example, in March, 1974, only one-fourth of those women sixteen years of age and older with eight years of schooling were in the labor force, and of those women who were high school dropouts, the proportion was about two-fifths. Furthermore, about half of the women who were high school graduates and had not received any college training were in the labor force, and 61 percent of those with four years of college were in the labor force. However, of those women 16 years of age or older who had completed five years of college or more, nearly 70 percent were in the labor force (1975 Handbook on Women Workers, 1975, pp. 187-188).

More women are receiving more education than ever before. In October of 1952, as many as 30 percent of all women 18 to 64 years of age had completed eight years or fewer of school. By March of 1973, this was less than 10 percent. In October of 1952, only about half, or 51 percent, of all women workers had completed at least four years of high school. By March, 1973, nearly three-fourths were high school graduates (1975 Handbook on Women Workers, 1975, pp. 183-184).

Furthermore, it is said that "women with college degrees are more likely than other women to be in the labor force because they are motivated to seek employment outside the home by the higher earnings available to them and because of their desire to use the skills they have acquired through higher education." To support this, there were twice as many women, or 13 percent, with college degrees in the labor force as women without college degrees (six percent) in the labor force. Also, more women are enrolling in college and receiving degrees. From 1964 to October, 1973, the number of women enrolled in college nearly doubled. In 1964, women accounted for 38 percent of the college students under 35 years of age. By 1973, 43 percent of the college students were women (1975 Handbook on Women Workers, 1975, pp. 182, 186, 200-201). In 1900, 16.9 percent of all degrees were earned by women; in 1950, 24.4 percent; in 1970, 40.4 percent; and in

1975, 44.6 percent of all degrees were earned by women. Furthermore, in 1975, 45.4 percent of all baccalaureate degrees were earned by women compared to 23.9 percent in 1950. Women earned 44.8 percent of all masters degrees and 21.3 percent of all doctoral degrees received in 1975, as compared to 29.2 percent and 9.7 percent, respectively, in 1950 (Wood and Larwood, 1977, p. 7).

Areas of Education Received by Women

Degrees Below the Baccalaureate Level. Seventy thousand, or 46 percent, of the associate degrees granted in 1970-71 were received by women. Of these, most were in the areas of health or medicine (nursing, dental assisting, etc.); business and commerce (secretarial, technology, marketing, etc.); data processing; and public service fields (1975 Handbook on Women Workers, 1975, p. 203).

Bachelors Degrees. In 1970-71, 43.5 percent of the bachelors degrees granted were received by women. The largest number of bachelors degrees conferred was in education. In fact, 130,000, or 36 percent, of the women received a bachelors degree in education. The number of women receiving bachelors degrees in education increased from approximately 70,000 in the 1961-62 school year to 87,000 in the 1965-66 school year, and to 132,000 in 1970-71. However, as a percentage of all bachelors degrees earned by women, the number earned in education has decreased. In 1961-62, more than 45 percent of all degrees earned by women were in education, in 1965-66 it was 39 percent, and in 1970-71, only 36 percent were in education. Also, 83,000, or most of the bachelors degrees earned by women, were in elementary education (1975 Handbook on Women Workers, 1975, pp. 204-205).

The second largest number, or 16 percent, of the bachelors degrees earned by women in 1970-71 were in social science, mainly in sociology and history (1975 Handbook on Women Workers, 1975, p. 205).

In the area of agricultural education during the 1975-76 school year, 73 women as compared to 990 men received bachelors degrees (Grant and Lind), 1978, p. 119).

Masters Degrees. Of the masters degrees earned in the 1970-71 school year, 40.1 percent were earned by women. Most, or 56 percent, were concentrated in the field of education, as compared with 36 percent of the degrees conferred. The increase of degrees in education at the masters level may be due to those women who majored in other fields of study at the undergraduate level, and obtained a masters degree in education in order to qualify to teach at the secondary level (1975 Handbook on Women Workers, 1975, p. 205).

The second largest area where masters degrees were earned by women was in letters, primarily in English and speech (1975 Handbook on Women Workers, 1975, pp. 205-206). Only 16 women during the 1975-76 school year earned a masters degree in agricultural education compared with 326 men (Grant and Lind, 1978, p. 119).

Doctoral Degrees. Of the 14.3 percent of the doctoral degrees earned by women, 30 percent were in education and approximately 13 percent were in biological sciences (1975 Handbook on Women Workers, 1975, pp. 205-206). Only one women received a doctoral degree in agricultural education during 1975-76 as compared with 36 men (Grant and Lind, 1978, p. 119).

Occupations of Women in the Labor Force

In April, 1974, the largest percentage (34.5 percent) of women 16 years of age and over were in clerical occupations. The second largest area of employment was in service occupations, representing 21.3 percent of all women workers. The third largest group of women, or 15.6 percent, were working in professional occupations. Thirteen percent of the women workers were operatives, 6.8 percent sales workers, five percent managers and administrators, 1.4 percent each of craft and kindred workers and farm workers, and 1.0 percent were nonfarm laborers (1975 Handbook on Women Workers, 1975, pp. 84-85).

The number of women workers increased the fastest in the professional and technical occupations group, where employment deviated from 2.6 to 5.2 million. The largest increases were reported in the number of teachers, health personnel and social workers. Farm workers and private household workers were the only two groups in which the number of women workers declined (1975 Handbook on Women Workers, 1975, p. 85).

The largest professional occupation for women is still, by far, teaching. In 1960, 1.3 million women were employed as non-college teachers, but by 1973, over 43 percent (2 million) of the women employed in professional occupations were women non-college teachers. Over half, or 1.1 million, of the women teachers were teaching at the elementary school level and 565,000 taught at the secondary level (1975 Handbook on Women Workers, 1975, p. 95).

In 1973, women teaching in colleges and universities numbered 133,000, or 0.4 percent of all women workers. Women teaching at the elementary school level numbered 1,094,000, or 3.4 percent of all women workers, and those teaching kindergarten and pre-kindergarten numbered 185,000, or 0.6 percent of all women in the labor force. There were 565,000, or 1.7 percent of all women teachers, at the secondary school level. By January of 1977, the number of women teaching pre-kindergarten and kindergarten had increased to 228,000, those teaching elementary school had increased to 1,383,000, and the number of women teaching at the secondary level increased to 1,188,000, or more than doubled (1975 Handbook on Women Workers, 1975, p. 89).

According to the U. S. Department of Labor, the number of jobs between 1974 and 1985 will increase in all occupational areas except that of household work and production agriculture, but the most rapid growth will occur in the technical and professional areas (Steiger and Cooper, 1975, p. 27).

Trends of Females in Vocational Education

By looking at the enrollment in vocational education for the last seven years, it can be seen that sharp differences in the distribution of females and males still exist.

In 1972, 40 percent of the 14,100,000 vocational education enrollees were in vocational education courses in grades nine through 12. The 44.5 percent of males could largely be found in agriculture, technical education, and in trade and industrial programs. Of those enrolled, 55.5 percent were females concentrated in home economics, health and office occupations. Females comprised 92.0 percent of the enrollment in non-wage-earning consumer and homemaking programs in home economics. Females also made up 84.7 percent of those enrolled in health occupations. On the other hand, females comprised only 5.4 percent of those enrolled in vocational agriculture, 9.8 percent of those in technical education, and 11.7 percent in trade and industrial education. The largest female enrollment in any area of vocational agriculture was in ornamental horticulture with 15,157, or 26.9 percent (Steele, 1974, pp. 1-2).

In 1976, 7,750,135, or 51.2 percent, of the total enrollment in vocational education was female. Females comprised 76.5 percent of those students enrolled in consumer and homemaking programs, 74.2 percent of those enrolled in gainful home economics, 69.6 percent of health occupations, and 61.2 percent of those students in office occupations (U. S. Department of HEW, Office of Education, 1978).

On the other hand, females comprised only 10.4 percent of those enrolled in vocational agriculture, 9.1 percent of those in technical education, and 10.9 percent of those enrolled in trade and industrial education (U. S. Department of HEW, Office of Education, 1978).

Studying the female secondary enrollments in vocational agriculture/agribusiness since 1963 shows that 950, or only 0.2 percent, of the total vocational agriculture/agribusiness enrollment prior to 19[illegible]3 were female, and by 1970, 17,000, or 3.1 percent, of the 550,833 were female. By 1975, the number of females enrolled in vocational agriculture/agribusiness had more than quadrupled to equal 79,949, or 11.9 percent of the total enrollment, and in 1976, 109,951 females were enrolled in vocational agriculture/agribusiness to make up 15.4 percent of the 712,182 students enrolled in vocational agriculture/agribusiness (U. S. Department of HEW, Office of Education, 1978).

As can be seen, the gap between female and male enrollment in non-traditional vocational programs is slowly beginning to close. Although some programs, such as vocational agriculture/agribusiness have a long way to go to fill this gap, definite improvement can, nonetheless, be observed throughout the period 1972-76.

Sex Stereotyping

Many books, newspaper articles, and magazine articles have centered on sex stereotyping, sex bias, and sex discrimination. Before reviewing the relationship of these terms to vocational education, they should be defined.

Title IX of the Education Amendments of 1972 defined sex discrimination as "any action which limits or denies a person or a group of persons opportunities, privileges, roles, or rewards on the basis of their sex." The 1975 Amendments define sex bias as "behaviors resulting from the assumption that one sex is superior to the other," and sex stereotyping as "attributing behaviors, abilities, interests, values, and roles to a person or group of persons on the basis of their sex" (Vetter and Peterson, 1972).

As King (1974) says, "Sex stereotyping by occupations is a reality in vocational education." As noted by Steele (1974), King (1974), Lerner (1976), Steiger and Cooper (1975), Maher (1976), and Rieder (1977), females are centered in non-gainful home economics, health, secretarial, clerical, and other office vocational education training areas, while males are centered in agriculture, technical education, and trade and industrial education. Basualdo (1975) and Sites (1976) also found that female and male vocational faculty tend to be similarly proportioned in these same areas.

The "why" it is this way can be explained in several ways. As Steele (1974) reports, "Historically, vocational technical education developed from a 1917 'male world-of-work model' and a 'female world-of-work model,' which sets the pattern for future enrollments. Most girls have been steered into non-wage-earning homemaking roles for over 20 years."

Further, Steele reports, "The educational organization is a pyramid dominated by men." Women dominate the pre-kindergarten, kindergarten, and elementary schools. Their numbers decrease in junior high and are reduced to the minority in senior high. At the junior college and college level they represent only 20 percent and female full professors are few. Furthermore, they are poorly represented in administrative positions, from elementary school principals and superintendents, and are rarely found as department heads, deans, or presidents on the college level. With few women in these positions of leadership and decision-making, there will more than likely be little change in the trends of enrollments in vocational education. One reason is that positive role models are needed. In a report prepared by Kane, Fernandez, and Godoff (1977) entitled "A Model to Retain Women Teachers and Skilled Women as Teachers in Non-Traditional Vocational Programs," it was stated that research indicated "women students need role models of the same sex to help them adjust successfully to non-traditional education." Furthermore, Kane, et al. (1977) showed the importance of vocational education instructors as role models when she reported, "63.0 percent of all senior high school teachers and 92.0 percent of all post-secondary teachers identified by non-traditional women as being very influential in their choice of occupational training programs were vocational education teachers." Of those vocational education teachers named, 94.0 percent were men. Despite the influential powers, Kane, et al., (1977) further reports that the majority of educators had encouraged fewer than 50 women in their schools to enroll in non-traditional programs and of those 50, fewer than 50.0 percent did enroll.

Since women dominate the traditional areas of home economics and health and office education, few role models can be found in non-traditional areas, such as agriculture, technical, and trade and industrial education programs, where fewer than 25.0 percent of those enrolled are females. It is obvious why role changes are not taking place very rapidly.

Other reasons given for the present sex-stereotyping in vocational education include attitudes of parents and counselors; media, such as textbooks, radio, and television; and cultural influences.

Parents often inhibit the occupational choice of their children. It is often heard, "I don't want my child to take agriculture, it's for boys," or "my son has no need for home economics." The parents, though, have been molded by cultural influences, such as tradition and religion. Their values and ideals have been established by generations of the "helpless housewife and protective breadwinner" syndrome.

Counseling is often supported through vocational inventories, of which many are sex biased (Sexton, 1976, pp. 70-71). Although revisions are being made, definite differences exist on evaluating the scores of males and females and the interpretation of them. Also, as Steiger and Cooper (1975, p. 42) report, the way women answer on interest inventory tests is often influenced by society's stereotyped visions of them. For example, a 1970 study showed typical females responses from 50 women, 40 years of age and older, when given an interest inventory test without special instructions. When the test was administered again, with special instruction to answer as though men and women had equal opportunities for job advancement, career and family could be combined successfully, and men liked intelligent women, their career aspirations were much higher. This seems to indicate that these tests have limited use in counseling.

Furthermore, researchers have confirmed that women have the aptitude, interest, and ability to perform jobs that have been traditionally dominated by men, but it is the "social discrimination in educational programs and industrial hiring" that has barred women from these jobs (Lerner, 1976, p. 7).

As pointed out by the pamphlet, "The Myth and the Reality," published by the Women's Bureau of the U.S. Department of Labor, Employment Standards Administration, in 1974, "tradition rather than job content has led to labeling certain jobs as women's and others as men's." The pamphlet also pointed out that a research laboratory found that in measuring 22 inherent aptitudes and knowledge areas, no sex differences existed in 14, women excelled in six, and men excelled in two.

The media help to reinforce sex-stereotyped roles. Textbooks in the elementary school show females as nurses, teachers, and secretaries, while carpenters, painters, and policemen are males (Sexton, 1976, pp. 67-68), (Strong, 1975, pp. 247-248), (Steele, 1974, p. 142). Radio, billboard, and television advertisements emphasize sex roles. The female is portrayed as the busy housewife or secretary, while the males are businessmen, repairmen, and plumbers. As Sexton (1976, p. 68) points out, even Sesame Street had no female characters until pressured by women's groups. Even at that, they are stereotyped characters.

Cultural influences, such as traditions and religion, have also played a part in establishing and maintaining sex role identification. Women are still not allowed to be priests in some religions and are very few in most.

How has our society begun to overcome sex stereotyping and sex bias? First of all, several laws have been passed to overcome sex discrimination against women in employment and education. Starting with the Equal Pay Act of 1963, sex discrimination was prohibited in the payment of wages for equal work on jobs requiring similar skills, efforts, and responsibilities performed under similar working conditions. Title VII of the Civil Rights Act of 1964 followed. This Act prohibits discrimination in employment based on sex, race, color, religion, or national origin. An amendment in 1972 extended the coverage to state and local government agencies and public and private schools. Furthermore, the Age Discrimination Act of 1967 guarantees the employment of the older worker on the basis of ability to perform the job. This gives those women re-entering the work force after their children are grown a better chance of locating employment. In 1965, Executive Order 11246 was introduced and required all government contracts to include provisions forbidding the contractor to discriminate on the basis of race, color, religion, or national origin. Executive Order 11375 of 1967 amends this to include sex. Title IX of the Education Amendments of 1972 prohibits sex discrimination in educational institutions receiving Federal funds. The 1976 Amendments mandated that programs be developed to overcome sex bias, stereotyping, and sex discrimination and included an authorization to the states to use federal monies to do so. Other legislation for women's benefits was passed. In 1974, the Women's Educational Equity Act (WEEA) was passed as part of the Special Projects Act of the Education Amendments, Public Law 93-380. This Act authorized the support of a wide variety of activities that focus on every area of education that perpetuates sex bias. Such activities as developing, evaluating, and disseminating materials; preservice and inservice training, including guidance and counseling personnel; research; guidance and counseling activities, including the development of tests which are non-discriminatory on the basis of sex; educational activities and programs to increase opportunities for adult women, especially underemployed and unemployed women; and the improvement and expansion of educational programs and activities for women in career education, vocational education, physical education, and educational administration. WEEA also authorized the Commissioner to award small grants ($15,000 or less) for "innovative" approaches to the achievement of educational equity for women (Women's Educational Equity Act, Second Annual Report, 1977, p. 1).

The attitudes of parents and counselors are slowly changing due to these laws. Also, since more women are forced to work due to economic reasons, they have an increased interest in their work as a career rather than a job and, thus, are overcoming the mold of feeling inferior to men (Abarbanel and Siegel, 1975, pp. 22-23). The few women entering non-traditional areas of work at least provide role models for a few more. As Steele (1974, p. 146) states, however, the programs designed to meet the needs of the 1960's are being implemented by the schools of the 1970's, and even with improved communications, changes will occur slowly. With more wives working, the husbands have had to help with the children, cook, and do other chores most have not been willing to do before. They have, thus, helped to challenge the traditional role model of men.

Since schools and teachers play such an important part in helping to shape and reinforce role models, changes must take place here also. As stated by Kane, et al. (1977), "Special efforts need to be exerted to recruit more women into male-intensive programs and particularly in removing sex stereotyping." One way of accomplishing this, they suggested, was to hire women to teach male-intensive courses, while at the same time giving them the responsibility of recruiting more females into male-intensive programs (Kane, et al., 1977, p. 36). Kane, et al. (1977) has prepared a model to retrain women teachers and skilled women as teachers in non-traditional vocational programs in hopes of reducing stereotyping.

Women's Educational Equity Act Programs have supported many other projects to overcome sex bias and sex stereotyping. For example, Colorado State University has recently developed a model program on "Educational Equity for Women in Professional Agriculture." Its primary purpose is to research the reasons for inequities of sex-role stereotyping in the field of professional agriculture. Another purpose includes the initiation of change in curriculum, advisement, career exploration, and career preparation.

Book companies are aware of the discriminatory illustrations and language found in textbooks. McGraw-Hill Book Company, for instance, had developed and printed guidelines for equal treatment of the sexes to be used in their publications.

Due to pressure from women's groups, other printed material and other media are watching the language and illustrations used.

The Women's Educational Equity Act program also supports the efforts of developing non-sex-bias tests to use in guidance and counseling, and provides preservice and inservice training programs in overcoming sex bias and sex stereotyping.

Females in Vocational Agriculture/Agribusiness

Until the recent legislation, such as Title IX in 1972, few females were allowed to enroll in vocational agriculture/agribusiness. Even then, most were specialized in the area of horticulture or, more specifically, floral design, as shown in 1972 vocational agriculture/agribusiness figures when 15,157, or 26.9 percent, of the females were in ornamental horticulture (Steele, 1974, pp. 1-2). As Curry (1975, pp. 270-271) reported, females have been accepted with a wide variety of attitudes with the question being asked "Do we (agricultural educators) really believe that sex stereotypes need to be erased with regard to agricultural education?" A wide variety of attitudes still exist, but it is the author's view, as a former vocational agriculture/agribusiness instructor, that female students are well accepted and often encouraged to enroll in vocational agriculture/agribusiness and the FFA.

Since females are accepted in vocational agriculture/agribusiness, and are still lagging behind in the percentage of enrollment they comprise, the National Agricultural Education Advisory Council, in their 1977 annual report, recommended to the Agricultural Education Division Executive Committee that the profession continue to accept females at all levels in agriculture/agribusiness programs and to encourage more women to become teachers of vocational agriculture/agribusiness. The council also raised the question, "Is sex stereotyping occurring with Agricultural Education?" (Fuller, 1977, pp. 124-125).

The same attitudes, from good to bad, have existed concerning women in the agricultural education field. The June, 1975, issue of The Agricultural Education Magazine featured women in agricultural education. All the articles written concerning female vocational agriculture/agribusiness teachers were very favorable. However, articles written by female vocational agriculture/agribusiness teachers and those women studying to become vocational agriculture/agribusiness teachers (Seaman, Knotts, Gorman, Worm and Sanders, and Walters, 1975) stressed the task of combating the prejudices of sex bias and sex stereotyping before and after becoming employed as vocational agriculture/agribusiness teachers. Another article by Bradley (1971) concerning the first female graduate of agricultural education at Kansas State University cited these same sex biases when applying for a job as a teacher of vocational agriculture/agribusiness. She was finally forced to accept a position teaching seventh grade science. These prejudices were the same as found with women in other non-traditional occupations, such as "women can't handle the mechanics part of agriculture"; "they don't have the farm background"' "they are not agressive enough to handle a class of 'boys'"; "they are not stable employees, especially if single"; and the list goes on. Further implications were made (Reynolds and Walker, 1975, pp. 272, 274) showing other biases. These included: women could fill the gap for the need of specialized teachers, such as in horticulture; they could teach in the elementary and junior high schools where agricultural occupations are being introduced, since "women typically relate better to the younger students"; and women could be hired in multiple teacher departments to breach the concern of a woman being the sole teacher.

Only two studies have been conducted to try to "prove" the effectiveness of women as teachers of vocational agriculture/agribusiness. Gregg, Hampton, and Juergenson (1975) surveyed the administrators, department chairmen, and regional supervisors of the 20 women agriculture teachers in California. The survey consisted of ten of the most common myths associated with women teachers of agriculture. The results indicated no significant differences between the three groups of respondents, and suggested that the 20 women presently teaching vocational agriculture/agribusiness were as technically and professionally competent as their male colleagues. The myth of women limiting their teaching to ornamental horticulture and related fields was strongly cited as untrue. The results also showed that women do not have poor classroom control, have no more personal problems involving students than male vocational agriculture/agribusiness teachers do, and that they were well accepted by students and the community in which they worked. Two myths were shown to express a slight concern. These included the acceptance of female vocational agriculture/agribusiness teachers in agricultural groups and that of women being strong leaders. Three other areas also expressed concern. These dealt with women handling large crowds, managing shop classes, and doing dirty jobs, such as cleaning the shop. It was concluded that most adults and students were pleased with the results of women teaching vocational agriculture/agribusiness.

Another study, similar to Gregg's was conducted by Bass in Pennsylvania (1977). Nine teacher educators from Pennsylvania State University, ten vocational agriculture state supervisors and consultants, along with 60 randomly selected teachers of vocational agriculture/agribusiness in Pennsylvania were mailed a survey to measure their attitudes toward women as agriculture teachers. At the time of the study, 11 women were employed as vocational agriculture/agribusiness teachers. The instrument contained several attitudes (myths) concerning women as teachers of vocational agriculture/agribusiness. These were very similar to Gregg's. The results showed no significant differences between the groups of respondents.

Of the respondents, 69, or 98.5 percent, agreed that women could perform effectively as agriculture teachers. Similar to Gregg, it showed women did not have poor classroom control or should not be limited to teaching horticulture, and were accepted in the community. Approximately 39 percent felt women could not manage shop courses and another 19 percent could not manage large animals. It was interesting to note, however, that 60, or 85.7 percent, of the respondents had not worked with women as agriculture teachers. The study concluded that women should be encouraged to enter the field of agricultural education.

No studies have been reported concerning the self-perceived teaching effectiveness of females as vocational agriculture/agribusiness teachers.

Summary

Statistics show that more women are working--nine out of ten women work at some time during their lives.

More women are receiving higher education, primarily in the area of education. However, very, very few of those women receive degrees in agricultural education.

The three largest groups of occupations women are entering are clerical, service, and professional. The largest professional occupation by far is teaching. Most of those teachers are in pre-kindergarten, kindergarten, and elementary schools; fewer are represented in secondary schools. Fewer women, still, are represented in vocational education, and most of these teach in the areas of home economics, clerical, and health.

The student enrollments in vocational education are similar to the distribution of teachers. Females predominate in the areas of home economics, office, and health occupations. On the other hand, males enroll in agriculture, technical education, and trade and industrial programs. Most of the female students in agriculture are concentrated in the area of ornamental horticulture. Therefore, sex stereotyping does exist in vocational education, primarily due to the attitudes of parents and counselors; the language and illustrations used in textbooks, radio, and television; cultural influences, such as tradition and religion; and lack of role models in non-traditional areas for both sexes.

Female vocational agriculture/agribusiness teachers are still few and far between. They are generally accepted by students; other vocational agriculture/agribusiness personnel, such as teachers, state supervisors, and teacher educators; and the community. However, certain sex role biases and sex role stereotyping are still common. In conclusion, according to the two state studies conducted, females are effective as teachers of vocational agriculture/agribusiness.

CHAPTER III

PROCEDURE

This chapter presents the procedure that was followed in the conduct of this study. The procedure is presented in four sections: (1) Identification of Population and Selection of Sample, (2) Development of the Instrument, (3) Submission of Instruments to the Sample, and (4) Analyses of Data.

Identification of Population and Selection of Sample

The population was comprised of all teachers of vocational agriculture/agribusiness in the secondary schools in states where female vocational agriculture/agribusiness teachers were employed in the 1977-78 school year. In order to determine which states employed female teachers of vocational agriculture/agribusiness, a letter was sent to the fifty state supervisors of vocational agriculture/agribusiness requesting them to indicate if female teachers were employed in their states and requesting a teacher directory with the female vocational agriculture/agribusiness teachers identified with a check mark or in some other manner. (A copy of the letter mailed to state supervisors of vocational agriculture/agribusiness is presented in Appendix A.) From the teacher directories received, a list was compiled containing the names and addresses of all identified female vocational agriculture/agribusiness teachers. Also using the directories of vocational agriculture/agribusiness teachers sent by each state supervisor, a sample of male vocational agriculture/agribusiness teachers was chosen. The sample was stratified by state and selected systematically using a random starting point. The number of male vocational agriculture/agribusiness teachers chosen corresponded with the number of female vocational agriculture/agribusiness teachers employed in that state.

Development of the Instrument

The development of an instrument to determine self-perceived teacher effectiveness and obtain basic information about the sample of female and male vocational agriculture/agribusiness teachers was an important part of the procedure.

In order to achieve both purposes, the instrument was divided into two sections. The first section was developed to obtain general information about the sample being studied. Six items were selected based on the objectives of the study. Both open-ended and structured type questions were used.

The six items included:

1. Education--The respondents were asked to check the highest level of education they had achieved. Six choices were provided as follows: high school diploma, associate degree, baccalaureate degree, masters degree, educational specialist degree or the equivalent of 30 semester hours past the masters degree, and doctoral degree.
2. Enrollment in vocational agriculture/agribusiness and the FFA--This question was divided into two parts. Part (a) was to determine if the respondents had been enrolled in vocational agriculture/agribusiness when in high school, and if

so, how many years. Part (b) was to determine if the respondents had been members of the FFA, and if so, how many years.

3. Primary major on baccalaureate degree--The respondents were given thirteen choices from which to check their primary major on their baccalaureate degree. The choices included: agricultural economics, agricultural education, agricultural engineering, agronomy, animal science, biology, dairy science, forestry, general agriculture, horticulture, poultry science, wildlife, and other.
4. Years of teaching experience--The respondents were asked to list the number of years they had taught vocational agriculture/agribusiness.
5. Area(s) and grade(s) presently teaching--The respondents were asked to indicate both the area(s) of vocational agriculture/agribusiness and the grade level(s) they were teaching. Seven of the eight areas of vocational agriculture/agribusiness (production agriculture; horticulture; agricultural mechanics; forestry; renewable natural resources; agricultural supplies and services; agricultural products, processing, and marketing) plus basic vocational agriculture and other were listed as choices presently taught.
6. Size of the department and department chairperson--The respondents were asked to indicate the number of persons presently teaching in their vocational agriculture/agribusiness department and if they were the department head or chairperson.

The second section on the instrument was to determine the self-perceived teaching effectiveness of female and male vocational agriculture/agribusiness teachers. In order to accomplish this, a list of 39 competencies and/or activities which all vocational agriculture/agribusiness teachers should be responsible for was compiled through a reveiw of literature on professional teacher competencies, consultation with agricultural educators, and personal experience of the researcher. Many of these competencies were taken from a 1976 study directed by Don R. Herring, Department of Agricultural Education, Texas A & M University, entitled "Identification and Validation of Competencies for Teacher Education--Agriculture." The list was divided into the following six competency areas: (1) Program Planning (six competencies), (2) Classroom and Laboratory Instruction (eleven competencies), (3) FFA (eight competencies), (4) Supervised Occupational Experience Programs (six competencies), (5) Adult Education (four competencies), and (6) Public Relations, Advisory Committees, and Professionalism (four competencies).

The 39 competencies were rated using a five-point Likert-type rating scale. The following headings and definitions were used in the scale:

1. Unsatisfactory--cannot perform the activity
2. Below average--activity is performed, but poorly
3. Average--activity is performed in an acceptable manner
4. Above average--activity is performed better than most
5. Superior--activity is performed at the utmost level

Respondents were instructed to circle the number corresponding with the most appropriate response to each competency. Space was provided for the respondents to indicate if a competency did not apply to their area of teaching responsibility.

The instrument was administered to an informal group of agricultural educators and to a graduate research methods class in the Department of Agricultural and Extension Education at Mississippi State University for suggestions and as an aid in developing face and construct validity. After revisions were made, the instrument was printed in final form and used in the study. The instrument was printed on color-coded paper in order to distinguish between the responses of the male and female vocational agriculture/agribusiness teachers. The instrument mailed to female vocational agriculture/agribusiness teachers was printed on green paper and those mailed to males were printed on yellow paper. (A copy of the instrument is presented in Appendix D.)

Submission of the Instruments to the Sample

On January 27, 1978, a letter was mailed to the fifty state supervisors requesting the state vocational agriculture/agribusiness teachers' directory with the female names identified (Appendix A). The state supervisors were asked to respond as to whether or not their state presently employed female vocational agriculture/agribusiness teachers. If the state employed no female vocational agriculture/agribusiness teachers, state supervisors were requested to respond and indicate so. After approximately two weeks (February 10, 1978), forty states, or 80.0 percent, of the state supervisors had replied. A follow-up letter was sent to ten states on February 13, 1978. (A copy of the follow-up letter sent to state supervisors of vocational agriculture/agribusiness is presented in Appendix B.) By March 1, 1978, 48, or 96.0 percent, of the state supervisors had responded. Ten of the 48 state supervisors who responded reported as having no female vocational agriculture/agribusiness teachers presently teaching.

The instrument, cover letter, and self-addressed stamped envelope were mailed on April 24, 1978, to the female vocational agriculture/agribusiness teachers and to the sample of male vocational agriculture/agribusiness teachers in the 38 states where female vocational agriculture/agribusiness teachers were employed. (A copy of the cover letter and instrument are presented in Appendices C and D, respectively).

On May 9th and 10th, a follow-up reminder post card was mailed to those male and female vocational agriculture/agribusiness teachers who had not sent in their questionnaires. (A copy of the follow-up post card is presented in Appendix E.) At the cut-off date of May 26, 1978, 444, or 68.3 percent, of the sample had responded. However, eleven, or 2.5 percent, of the returned instruments were unusable.

Analyses of Data

Data from the survey instruments were coded for computer analysis at the Thomas E. Tramel Computing Center at Mississippi State University. Several statistical procedures were used. Frequencies, percentages, means, and standard deviations were computed. The statistical procedure also included a One-Way Analysis of Variance (SPSS) to determine if a significant difference existed between the self-perceived teaching effectiveness of female and male vocational agriculture/agribusiness teachers. A Two-Way Analysis of Variance (BMDP) was used to determine if a significant difference existed between the self-perceived teaching effectiveness of female and male vocational agriculture/agribusiness teachers: (1) achieving varying levels of education, (2) who were enrolled in vocational agriculture/agribusiness in high school and those who were not, and (3) who were members of the FFA and those who were not.

CHAPTER IV

PRESENTATION OF DATA

The purpose of this chapter is to report the findings of the study. The chapter is divided into four sections: (1) Characteristics of the Population and Sample, (2) Characteristics of the Respondents; (3) Self-Perceived Teaching Effectiveness of the Respondents; and (4) Summary of the Data Presentation.

Characteristics of the Population and Sample

Forty-eight, or 96.0 percent, of the fifty state supervisors of vocational agriculture/agribusiness responded to the survey to determine the number of female vocational agriculture/agribusiness teachers employed. No responses were received from the States of Utah and New Hampshire. Of the 48 state supervisors who responded, 38, or 79.2 percent, reported that their states employed a total of 325 female vocational agriculture/agribusiness teachers in the 1977-78 school year. These same states also employed 10,797 male teachers.

The number of female and male teachers of vocational agriculture/agribusiness in each state and the percent of the total number of vocational agriculture/agribusiness teachers who are female and male are presented in Table 1. As can be seen from this table, California has the largest number of female teachers, with 55. This is followed by Ohio with 40 and Florida with 37. However, Maryland employs the highest percentage of female vocational agriculture/agribusiness

Table 1. Number and Percent of Female and Male Vocational Agriculture Teachers Employed in the Secondary Schools in the 1977-78 School Year, By States Which Employed Female Vocational Agriculture/Agribusiness Teachers

State	Female Teachers		Male Teachers		Total Number of Teachers in the State
	Number	Percent	Number	Percent	
Alabama	4	0.9	456	99.1	460
Arizona	2	2.3	85	97.7	87
California	55	7.4	684	92.6	739
Colorado	1	0.9	108	99.1	109
Connecticut	5	8.2	56	91.8	61
Delaware	5	10.4	43	89.6	48
Florida	37	6.8	504	93.2	541
Georgia	6	1.7	338	98.3	344
Idaho	2	2.4	82	97.6	84
Illinois	9	2.0	439	98.0	448
Indiana	4	1.4	284	98.6	288
Kansas	1	0.5	188	99.5	189
Kentucky	3	1.0	312	99.0	315
Louisiana	1	0.3	311	99.7	312
Maine	1	2.0	50	98.0	51
Maryland	13	12.9	88	87.1	101
Massachusetts	4	4.4	78	95.6	82
Michigan	10	4.6	205	95.4	215
Minnesota	12	1.8	635	98.2	647

(Continued on next page)

Table 1. Number and Percent of Female and Male Vocational Agriculture/Agribusiness Teachers Employed in the Secondary Schools in the 1977-78 School Year, By States Which Employed Female Vocational Agriculture/Agribusiness Teachers (Continued)

State	Female Teachers		Male Teachers		Total Number of Teachers in the State
	Number	Percent	Number	Percent	
Missouri	4	1.2	333	98.8	337
Montana	1	1.1	90	98.9	91
Nebraska	1	0.6	155	99.4	156
Nevada	1	4.0	24	96.0	25
New Jersey	8	9.9	73	90.1	81
New York	21	5.8	339	94.2	360
North Carolina	10	2.2	440	97.8	450
North Dakota	2	1.3	154	98.7	156
Ohio	40	5.4	700	94.6	740
Oregon	5	3.6	136	96.4	141
Pennsylvania	2	0.6	362	99.4	364
South Carolina	3	1.5	195	98.5	198
South Dakota	3	3.7	78	96.3	81
Tennessee	3	1.1	266	98.9	269
Texas	5	0.3	1488	99.7	1493
Vermont	4	8.3	44	91.7	48
Virginia	21	5.2	379	94.8	400
Washington	7	2.6	267	97.4	274
Wisconsin	9	2.7	328	97.3	337
TOTAL	325	2.9	10,797	97.1	11,122

teachers with 13, or 12.9 percent, followed by Delaware with five, or 10.4 percent, and New Jersey with eight, or 9.9 percent.

When the employment of female teachers of vocational agriculture/agribusiness was analyzed on a regional basis, it was found that the Eastern region had over twice the number (134) of female vocational agriculture/agribusiness teachers as the Central (58) and Southern (54), regions, and nearly twice the number of the Western region (79). The Eastern region also had the highest percentage, or 4.6 percent, of female vocational agriculture/agribusiness teachers as determined by the total number of vocational agriculture/agribusiness teachers employed in that region. The Western and Southern regions employed approximately the same percentages of females with 2.2 percent and 2.1 percent, respectively. The Southern region employed the fewest, or 54 female vocational agriculture/agribusiness teachers, but the Central region employed the lowest percentage, or 1.7 percent. These data are presented in Table 2.

Characteristics of the Respondents

The characteristics of the respondents will be presented in this section. The findings are presented in terms of the total percentage of both female and male vocational agriculture/agribusiness teachers, the percentage of female vocational agriculture/agribusiness teachers, and the percentage of male vocational agriculture/agribusiness teachers. The findings are based on a mail survey sent to 325 female and 325 male teachers, or a total of 650 teachers.

Table 2. Number and Percent of Female and Male Vocational Agriculture/Agribusiness Teachers Employed in the 1977-78 School Year by Region

Region	Female Teachers		Male Teachers		Total Number of Teachers in the Region
	Number	Percent	Number	Percent	
WESTERN: Alaska, Arizona, California, Colorado, Hawaii, Idaho, Montana, New Mexico, Oklahoma, Oregon, Texas, Washington, Wyoming.	79	2.2	3,555	97.8	3,634
EASTERN: Connecticut, Delaware, Maine, Maryland, Massachusetts, New Jersey, New York, North Carolina, Ohio, Pennsylvania, Rhode Island, Vermont, Virginia, West Virginia.	134	4.6	2,784	95.4	2,918
CENTRAL: Illinois, Indiana, Iowa, Kansas, Kentucky, Michigan, Minnesota, Missouri, Nebraska, North Dakota, South Dakota, Wisconsin.	58	1.7	3,392	98.3	3,450
SOUTHERN: Alabama, Arkansas, Florida, Georgia, Louisiana, Mississippi, South Carolina, Tennessee.	54	2.1	2,610	97.9	2,664
TOTAL	325	2.6	12,341	97.4	12,666

Two hundred twenty-six, or 69.5 percent, of the instruments from females and 218, or 67.1 percent, of the instruments from males, or a total of 444 instruments (68.3 percent) were returned. All 38 states were represented in the returns. Of the 444 instruments returned, 11, or 2.5 percent, could not be used since the respondents were not teaching secondary schools. These 11 responses included 10, or 4.42 percent, from females and one, or 0.46 percent, from males. Therefore, the total number of valid responses from females was 216, or 66.5 percent, and from males was 217, or 66.8 percent.

Educational Level

Two hundred sixty-nine, or 62.7 percent, of the respondents had received a baccalaureate degree as their highest level of education. Master's degrees were held by 112, or 26.1 percent, of the respondents. Two-thirds, or 73, of those who held master's degrees were male vocational agriculture/agribusiness teachers. Of those vocational agriculture/agribusiness teachers surveyed, 19, or 4.4 percent, had educational specialist degrees, of which three-fourths, or 15, were held by males. Three, or 0.7 percent, of the respondents had doctoral degrees. The findings of the educational levels achieved by the respondents are presented in Table 3.

Enrollment in Vocational Agriculture/Agribusiness and FFA When in High School

It was found that 159, or 36.8 percent, of the respondents were enrolled in vocational agriculture/agribusiness when they were in

Table 3. Number and Percent of Respondents by Highest Level of Education Achieved

Educational Level	Female Respondents		Male Respondents		Total Respondents	
	Number	Percent	Number	Percent	Number	Percent
High school diploma	6	2.8	9	4.2	15	3.5
Associate degree	7	3.3	4	1.9	11	2.6
Baccalaureate degree	157	73.0	112	52.3	269	62.7
Masters degree	39	18.1	73	34.1	112	26.1
Educational specialist degree	4	1.9	15	7.0	19	4.4
Doctoral degree	2	0.9	1	0.5	3	0.7
TOTAL	215	100.0	214	100.0	429	100.0

Table 4. Number and Percent of Respondents Who Were Enrolled in Vocational Agriculture/ Agribusiness When In High School

Data	Female Respondents		Male Respondents		Total Respondents	
	Number	Percent	Number	Percent	Number	Percent
Not Enrolled	185	86.0	88	40.6	273	63.2
Enrolled	30	14.0	129	59.4	159	36.8
TOTAL	215	100.0	217	100.0	432	100.0
Mean Number of Years	2.63		3.61		3.41	
Standard Deviation	1.27		.90		1.06	

Table 5. Number and Percent of Respondents Who Were Members of the FFA When in High School

Data	Female Respondents		Male Respondents		Total Respondents	
	Number	Percent	Number	Percent	Number	Percent
Not Members of the FFA	184	86.0	87	40.7	271	63.3
Members of the FFA	30	14.0	127	59.3	157	36.7
TOTAL	214	100.0	214	100.0	428	100.0
Mean Number of Years	3.17		3.89		3.74	
Standard Deviation	1.47		1.10		1.21	

high school. By the sex of the respondents, 129, or 59.4 percent, of the males, but only 30, or 14.0 percent of the females were enrolled in vocational agriculture/agribusiness when in high school. Of those enrolled, females averaged 2.63 years and ranged from one to four years in vocational agriculture/agribusiness. However, the average enrollment of males in vocational agriculture/agribusiness was 3.61 years and ranged from one to seven years. These data are presented in Table 4.

Approximately the same percentages (157, or 36.7 percent) were enrolled in FFA, but the number of years enrolled varied. Thirty, or 14.0 percent, of the females were in the FFA for an average of 3.17 years and ranged from one to six years, while 59.3 percent, or 127, of the males were at one time in the FFA for an average of 3.89 years and ranged from one to seven years. These data are presented in Table 5.

Primary Majors on Baccalaureate Degree

It was found that the largest number, 138, or 33.4 percent, of the respondents had a baccalaureate degree with a major in agricultural education, followed by 80, or 19.4 percent, in horticulture and 60, or 14.5 percent, in animal science. Sixty-five, or 31.7 percent, of the females had a baccalaureate degree in horticulture, while 38, or 18.5 percent, of the females had baccalaureate degrees in agricultural education, and 36, or 17.6 percent, in animal science. Nearly one-half (100, or 48.1 percent) of the males had received their baccalaureate degree with a major in agricultural education, followed by 24, or 11.5 percent, in animal science. A

Table 6. Number and Percent of Respondents By Primary Major on Baccalaureate Degree

Major	Female Respondents		Male Respondents		Total Respondents	
	Number	Percent	Number	Percent	Number	Percent
Agricultural Economics	1	0.5	7	3.4	8	1.9
Agricultural Education	38	18.5	100	48.1	138	33.4
Agricultural Engineering	0	0.0	2	1.0	2	0.5
Agronomy	0	0.0	3	1.4	3	0.7
Animal Science	36	17.6	24	11.5	60	14.5
Biology	9	4.4	2	1.0	11	2.7
Dairy Science	3	1.5	3	1.4	6	1.5
Forestry	0	0.0	2	1.0	2	0.5
General Agriculture	5	2.4	15	7.2	20	4.8
Horticulture	65	31.7	15	7.2	80	19.4
Poultry Science	0	0.0	0	0.0	0	0.0
Wildlife	0	0.0	2	1.0	2	0.5
Other	25	12.2	19	9.1	44	10.7
Checked Two or More Degrees	23	11.2	14	6.7	37	9.0
TOTAL	205	100.0	208	100.0	413	100.0

significant number of the respondents--25, or 12.2 percent, of the females; 19, or 9.1 percent, of the males; and 44, or 10.7 percent, of both male and female respondents--had received their baccalaureate degrees in other areas. Some of the baccalaureate degrees listed under other included: industrial education, home economics, general science, business administration, food technology, agricultural journalism, botany, physical education, zoology, natural resources, food processing, plant pathology and chemistry. Also, 37, or 9.0 percent, of the respondents checked two or more degrees, often agricultural education plus animal science or horticulture. These respondents included 23, or 11.2 percent, of the females and 14, or 6.7 percent, of the males. These data are shown in Table 6.

Teaching Experience

It was found that 224, or 54.6 percent, of the respondents (both male and female) had taught vocational agriculture/agribusiness between one and three years. Of the female respondents, 71, or 33.2 percent, had taught vocational agriculture/agribusiness for only one year; 72, or 33.6 percent, for two years; and 31, or 14.5 percent, for three years. Thirty-eight, or 17.8 percent, had taught four to ten years. Two, or 0.9 percent, of the female vocational agriculture/agribusiness teachers had taught for 15 years. The male respondents were more evenly distributed and had taught from one to 41 years. Seventeen, or 8.0 percent, of the males had taught vocational agriculture/agribusiness for only one year; 17, or 7.9 percent, had taught for two years, and 26, or 12.2 percent, for three years.

Table 7. Number and Percent of Respondents by Number of Years in Teaching Vocational Agriculture/Agribusiness

Number of Years	Female Respondents		Male Respondents		Total Respondents	
	Number	Percent	Number	Percent	Number	Percent
1	71	33.2	17	7.9	88	20.6
2	72	33.6	17	7.9	89	20.8
3	31	14.5	26	12.2	57	13.3
4	13	6.1	19	8.9	32	7.5
5	8	3.7	14	6.5	22	5.1
6	9	4.2	8	3.7	17	4.0
7	5	2.3	9	4.2	14	3.3
8	1	0.5	11	5.1	12	2.8
9	1	0.5	6	2.8	7	1.6
10	1	0.5	11	5.1	12	2.8
11	0	0.0	7	3.3	7	1.6
12	0	0.0	4	1.9	4	0.9
13	0	0.0	5	2.3	5	1.2
14	0	0.0	5	2.3	5	1.2
15	2	0.9	4	1.9	6	1.4
16	0	0.0	1	0.5	1	0.2
17	0	0.0	3	1.4	3	0.7
18	0	0.0	1	0.5	1	0.2
19	0	0.0	2	0.9	2	0.5
20	0	0.0	3	1.4	3	0.7

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Table 7. Number and Percent of Respondents by Number of Years in Teaching Vocational Agriculture/Agribusiness (Continued)

Number of Years	Female Respondents		Male Respondents		Total Respondents	
	Number	Percent	Number	Percent	Number	Percent
21	0	0.0	5	2.3	5	1.2
22	0	0.0	2	0.9	2	0.5
23	0	0.0	4	1.9	4	0.9
24	0	0.0	6	2.8	6	1.4
25	0	0.0	1	0.5	1	0.2
26	0	0.0	4	1.9	4	0.9
27	0	0.0	1	0.5	1	0.2
28	0	0.0	1	0.5	1	0.2
29	0	0.0	4	1.9	4	0.9
30	0	0.0	2	0.9	2	0.5
31	0	0.0	1	0.5	1	0.2
32	0	0.0	1	0.5	1	0.2
33	0	0.0	2	0.9	2	0.5
34	0	0.0	2	0.9	2	0.5
36	0	0.0	1	0.5	1	0.2
38	0	0.0	3	1.4	3	0.7
41	0	0.0	1	0.5	1	0.2
TOTAL	214	100.0	214	100.0	428	100.0
MEAN	2.55		10.63		6.589	
S.D.	2.08		9.66		8.065	

Areas and Grade Levels Taught by Respondents

It was found that 116, or 53.7 percent, of the female respondents were teaching 11th grade horticulture; 113, or 52.3 percent, were teaching 12th grade horticulture; and over one-third, 80, or 37.0 percent, of the female respondents were teaching 10th grade horticulture. Sixty-six, or 30.6 percent, of the female respondents were teaching 9th grade basic vocational agriculture. The male vocational agriculture/agribusiness teachers in this study were teaching more production agriculture and agricultural mechanics classes. Ninety-seven, or 44.7 percent, of the male respondents were teaching 11th grade production agriculture; 88, or 40.6 percent, 12th grade production agriculture; 85, or 39.2 percent, 10th grade production agriculture; 74, or 34.1 percent, 11th grade agricultural mechanics; and 74, or 34.1 percent, 12th grade agricultural mechanics. However, the highest percentage of the male respondents, 98, or 45.2 percent, were teaching 9th grade basic vocational agriculture/agribusiness.

Table 9 presents the areas of vocational agriculture/agribusiness being taught by the total number of respondents. It does not take the grade level into account, and thus, presents a more precise number in each area. The first column presents the areas of vocational agriculture/agribusiness. The second column shows the number of respondents teaching only in one area, such as 28 respondents teach only basic vocational agriculture/agribusiness. The third column presents those teaching one particular area plus others, such as 172 respondents teach basic vocational agriculture/agribusi-

Table 8. Number and Percent of Respondents by Areas of Vocational Agriculture/Agribusiness and Grade Levels Taught

GRADE 7 Area of Vocational Agriculture/ Agribusiness	Female Respondents		Male Respondents		Total Respondents	
	Number	Percent	Number	Percent	Number	Percent
Basic Vocational Agriculture	6	2.8	16	7.4	22	5.1
Production Agriculture	1	0.5	3	1.4	4	0.9
Horticulture	1	0.5	3	1.4	4	0.9
Agricultural Mechanics	0	0.0	2	0.9	2	0.5
Forestry	0	0.0	1	0.5	1	0.2
Renewable Natural Resources	0	0.0	0	0.0	0	0.0
Agricultural Supplies and Services	0	0.0	0	0.0	0	0.0
Agricultural Products, Processing, and Marketing	0	0.0	0	0.0	0	0.0
Other*	6	2.9	4	1.8	10	2.3
TOTAL GRADE 7	14	6.7	29	13.4	43	9.9

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Table 8. Number and Percent of Respondents by Areas of Vocational Agriculture/Agribusiness and Grade Levels Taught (Continued)

GRADE 8 Area of Vocational Agriculture/ Agribusiness	Female Respondents		Male Respondents		Total Respondents	
	Number	Percent	Number	Percent	Number	Percent
Basic Vocational Agriculture	10	4.6	23	10.6	33	7.6
Production Agriculture	2	0.9	8	3.7	10	2.3
Horticulture	6	2.8	6	2.8	12	2.8
Agricultural Mechanics	1	0.5	4	1.8	5	1.2
Forestry	1	0.5	1	0.5	2	0.5
Renewable Natural Resources	1	0.5	1	0.5	2	0.5
Agricultural Supplies and Services	0	0.0	1	0.5	1	0.2
Agricultural Products, Processing, and Marketing	0	0.0	0	0.0	0	0.0
Other*	8	3.8	5	2.3	13	3.1
TOTAL GRADE 8	29	13.6	49	22.7	78	18.2

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Table 8. Number and Percent of Respondents by Areas of Vocational Agriculture/Agribusiness and Grade Levels Taught (Continued)

GRADE 9 Area of Vocational Agriculture/ Agribusiness	Female Respondents		Male Respondents		Total Respondents	
	Number	Percent	Number	Percent	Number	Percent
Basic Vocational Agriculture	66	30.6	98	45.2	164	37.9
Production Agriculture	37	17.1	62	28.6	99	22.9
Horticulture	28	13.0	27	12.4	55	12.7
Agricultural Mechanics	17	7.9	36	16.6	53	12.2
Forestry	8	3.7	10	4.6	18	4.2
Renewable Natural Resources	9	4.2	13	6.0	22	5.1
Agricultural Supplies and Services	4	1.9	8	3.7	12	2.8
Agricultural Products, Processing, and Marketing	3	1.4	7	3.2	10	2.3
Other*	24	11.1	10	4.6	34	7.9
TOTAL GRADE 9	196	90.9	271	124.9	467	108.0

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Table 8. Number and Percent of Respondents by Areas of Vocational Agriculture/Agribusiness and Grade Levels Taught (Continued)

GRADE 10 Area of Vocational Agriculture/ Agribusiness	Female Respondents		Male Respondents		Total Respondents	
	Number	Percent	Number	Percent	Number	Percent
Basic Vocational Agriculture	42	19.4	68	31.3	110	25.4
Production Agriculture	46	21.3	85	39.2	131	30.3
Horticulture	80	37.0	46	21.2	126	29.1
Agricultural Mechanics	17	7.9	62	28.6	79	18.2
Forestry	20	9.3	18	8.3	38	8.8
Renewable Natural Resources	11	5.1	18	8.3	29	6.7
Agricultural Supplies and Services	8	3.7	11	5.1	19	4.4
Agricultural Products, Processing and Marketing	6	2.8	8	3.7	14	3.2
Other*	43	20.0	15	6.9	58	13.4
TOTAL GRADE 10	273	126.5	331	152.6	604	139.5

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Table 8. Number and Percent of Respondents by Areas of Vocational Agriculture/Agribusiness and Grade Levels Taught (Continued)

GRADE 11 Area of Vocational Agriculture/ Agribusiness	Female Respondents		Male Respondents		Total Respondents	
	Number	Percent	Number	Percent	Number	Percent
Basic Vocational Agriculture	28	13.0	38	17.5	66	15.2
Production Agriculture	48	22.2	97	44.7	145	33.5
Horticulture	116	53.7	54	24.9	170	39.3
Agricultural Mechanics	20	9.3	74	34.1	94	21.7
Forestry	20	9.3	26	12.0	46	10.6
Renewable Natural Resources	14	6.5	20	9.2	34	7.9
Agricultural Supplies and Services	12	5.6	25	11.5	37	8.5
Agricultural Products, Processing, and Marketing	10	4.6	21	9.7	31	7.2
Other*	60	27.8	22	10.1	82	19.0
TOTAL GRADE 11	328	152.0	377	173.7	705	162.9

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Table 8. Number and Percent of Respondents by Areas of Vocational Agriculture/Agribusiness and Grade Levels Taught (Continued)

GRADE 12 Area of Vocational Agriculture/ Agribusiness	Female Respondents		Male Respondents		Total Respondents	
	Number	Percent	Number	Percent	Number	Percent
Basic Vocational Agriculture	28	13.0	36	16.6	64	14.8
Production Agriculture	45	20.8	88	40.6	133	30.7
Horticulture	113	52.3	49	22.6	162	37.4
Agricultural Mechanics	16	7.4	74	34.1	90	20.8
Forestry	21	9.7	22	10.1	43	9.9
Renewable Natural Resources	14	6.5	21	9.7	35	8.1
Agricultural Supplies and Services	19	8.8	31	14.3	50	11.5
Agricultural Products, Processing, and Marketing	12	5.6	21	9.7	33	7.6
Other*	60	27.7	26	12.0	86	19.8
TOTAL GRADE 12	328	151.8	368	169.7	696	160.6

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Table 8. Number and Percent of Respondents by Areas of Vocational Agriculture/Agribusiness and Grade Levels Taught (Continued)

ADULT Area of Vocational Agriculture/ Agribusiness	Female Respondents		Male Respondents		Total Respondents	
	Number	Percent	Number	Percent	Number	Percent
Basic Vocational Agriculture	3	1.4	7	3.2	10	2.3
Production Agriculture	4	1.9	21	9.7	25	5.8
Horticulture	37	17.1	10	4.6	47	10.9
Agricultural Mechanics	2	0.9	23	10.6	25	5.8
Forestry	2	0.9	1	0.5	3	0.7
Renewable Natural Resources	1	0.5	0	0.0	1	0.2
Agricultural Supplies and Services	0	0.0	2	0.9	2	0.5
Agricultural Products, Processing, and Marketing	2	0.9	2	0.9	4	0.9
Other*	15	7.0	13	6.0	28	6.4
TOTAL ADULT	66	30.6	79	36.4	145	33.5

*Other includes: farm management, small animal care, math, animal husbandry, environmental science, horse management, auto mechanics, zoo life, and pet grooming.

Table 9. Number and Percent of Respondents by Area of Vocational Agriculture/Agribusiness Taught By Respondents

Area of Vocational Agriculture/ Agribusiness	Number Teaching Only One Area	Number Teaching Area Plus Others	Total*
Basic vocational agriculture/agribusiness	28	172	200
Production agriculture	19	157	176
Horticulture	93	116	209
Agricultural mechanics	22	107	129
Forestry	1	60	61
Renewable natural resources	2	47	49
Agricultural supplies and services	0	62	62
Agricultural products, processing, and marketing	1	37	38
Other**	22	45	67

*The total number of respondents was 433; however, the total does not equal 433 since some respondents taught in more than one area. However, the totals can be looked at in a relative manner.

**Other includes: farm management, small animal care, math, animal husbandry, environmental science, horse management, auto mechanics, zoo life, and pet grooming.

ness plus one or more areas. The total is the sum of columns two and three giving the total number that teach in each area.

Number of Teachers in Department

Over one-third (159, or 36.8 percent) of the vocational agriculture/agribusiness teachers in this study were teaching in one-teacher departments. Nearly another third, or 136 (31.5 percent), were teaching in a two-teacher department, and 62, or 14.4 percent, were teaching in a three-teacher department. More males, 86, or 39.6 percent, than females, 73, or 34.0 percent, were teaching in one-teacher vocational agriculture/agribusiness departments. Also, more males, 72, or 33.2 percent, than females, 65, or 29.8 percent, were teaching in two-teacher departments. A greater percentage of females than males were represented in the three-teacher vocational agriculture/agribusiness departments or larger. The findings are presented in Table 10.

Table 11 shows that 195, or 45.5 percent, of the respondents were chairpersons of their vocational agriculture/agribusiness departments. However, more males, 112, or 56.6 percent, than females, 73 or 34.3 percent, were heads of their departments.

Table 10. Number and Percent of Respondents by Number of Teachers in the Vocational Agriculture/Agribusiness Departments, Including the Respondent

Number in Department	Female Respondents		Male Respondents		Total Respondents	
	Number	Percent	Number	Percent	Number	Percent
1	73	34.0	86	39.6	159	36.8
2	64	29.8	72	33.2	136	31.5
3	31	14.4	31	14.3	62	14.4
4	20	9.3	12	5.5	32	7.4
5	12	5.6	10	4.6	22	5.1
6	3	1.4	2	0.9	5	1.2
7	4	1.9	1	0.5	5	1.2
8	2	0.9	2	0.9	4	0.9
9	3	1.4	1	0.5	4	0.9
10	1	0.5	0	0.0	1	0.2
15	1	0.5	0	0.0	1	0.2
20	1	0.5	0	0.0	1	0.2
TOTAL	215	100.0	217	100.0	432	100.0
MEAN	2.64		2.14		2.39	
S.D.	2.30		1.41		1.92	

Table 11. Number and Percent of Respondents as Department Heads (Chairpersons)

Female Respondents		Male Respondents		Total Respondents	
Number	Percent	Number	Percent	Number	Percent
73	34.3	122	56.5	195	45.5
N = 213		N = 216		N = 429	

Self-Perceived Teaching Effectiveness of the Respondents

The respondents' ratings of their self-perceived effectiveness as teachers of vocational agriculture/agribusiness included 39 competencies, divided into six competency areas. These areas included program planning; classroom and laboratory instruction; FFA; supervised occupational experience programs; adult education; and public relations, advisory committees, and professionalism. The number of respondents, the mean, standard deviation, and the number of respondents rating each activity as not required in their programs for both males and females was determined for each competency. The means, therefore, were determined on a five-point scale, and did not include those who did not respond to the question or responded by circling "Does Not Apply." The overall effectiveness was also determined for each competency area. Tables 12 through 17 present the findings of the respondents' self-perceived teaching effectiveness according to each competency area.

Program Planning

In the competency area of program planning, the number of respondents performing the competencies ranged from 336, or 77.6 percent, to 430, or 99.3 percent. Ninety-three, or 21.5 percent, of the respondents (61, or 28.2 percent, were females) reported that maintaining a summer program of work did not apply to their program. Also, 66, or 15.2 percent, of the respondents reported that preparing departmental budgets was not a competency they performed. Forty-five, or 20.8 percent, of the females responded in this manner.

Considering the total number of respondents, both males and females, the means ranged from 3.59 to 3.85 in the competency area of program planning. Males rated themselves lowest, with a mean of 3.55, in developing written program plans, and highest, with a mean of 3.92, in maintaining a summer program of work. Females, on the other hand, rated themselves lowest, with a mean of 3.36, in preparing departmental budgets and highest in determining student needs, with a mean of 3.79. The overall self-perceived teaching effectiveness for the competency area of program planning for both male and female respondents was 3.71, or average. For male vocational agriculture/agribusiness teachers, the mean was 3.77 and for females, 3.65. Table 12 reports these findings.

When comparing the self-perceived teaching effectiveness by the sex of the respondents, females rated themselves above the males only in one competency, that of developing written program plans. However, the difference for the self-perceived teaching effectiveness, dependent upon the sex of the respondent, was significant at the .05 level

Table 12. Rating of Self-Perceived Effectiveness of Vocational Agriculture/Agribusiness Teachers on Competencies in the Competency Area of Program Planning

Competencies in Program Planning	N						DOES NOT APPLY						$\bar{X}$ and S.D.*					
	Female Respondents		Male Respondents		Total Respondents		Female Respondents		Male Respondents		Total Respondents		Female Respondents		Male Respondents		Total Respondents	
	No.	Pct.	No.	Pct.	No.	Pct.	No.	Pct.	No.	Pct.	No.	Pct.	$\bar{X}$	S.D.	$\bar{X}$	S.D.	$\bar{X}$	S.D.
1. Develop written program plans	214	99.1	216	99.5	430	99.3	2	0.9	1	0.5	3	0.7	3.63	.79	3.55	.82	3.59	.80
2. Determine student needs	212	98.1	215	99.1	427	98.6	3	1.4	1	0.5	4	0.9	3.79	.68	3.88	.76	3.83	.72
3. Prepare departmental budgets	171	69.2	194	89.4	365	84.3	45	20.8	21	9.7	66	15.2	3.36	.93	3.78	.95	3.59	.96
4. Complete required report forms	202	93.5	211	97.2	413	95.4	12	5.6	5	2.3	17	3.9	3.72	.88	3.81	.98	3.77	.93
5. Maintain a summer program of work	153	70.8	183	84.3	336	77.6	61	28.2	32	14.7	93	21.5	3.75	.99	3.92	.96	3.85	.98
6. Evaluate the vocational agriculture/ agribusiness program	192	88.9	203	93.5	395	91.2	21	9.7	11	5.1	32	7.4	3.59	.79	3.72	.79	3.66	.79
Overall Self-Perceived Effectiveness of the Program Planning Competency Area	216	100.0	217	100.0	433	100.0							3.65	.53	3.77	.63	3.71	.58

*Based on a five-point rating scale of 1 = unsatisfactory, 2 = below average, 3 = average, 4 = above average, and 5 = superior.

for only one competency, that of preparing departmental budgets. Females rated themselves significantly lower for this competency. These findings are presented in Table 13. The Analysis of Variance Summary Tables for the significant competency can be found in Appendix F, Table A-1.

Table 13. Summary Table of the Self-Perceived Teaching Effectiveness of Vocational Agriculture/Agribusiness Teachers on Competencies in the Competency Area of Program Planning By the Sex of the Respondents

Competency	F Probability
1. Develop written program plans	.275
2. Determine student needs	.187
3. Prepare departmental budgets	.000*
4. Complete required report forms	.344
5. Maintain a summer program of work	.104
6. Evaluate the vocational agriculture/ agribusiness program	.085

*Significant at the .05 level of probability

Classroom and Laboratory Instruction

The number of respondents performing the competencies in the competency area of classroom and laboratory instruction ranged from 375, or 86.6 percent, to 432, or 99.8 percent. The competency in which the largest number of respondents replied as not applying to their program was that of maintaining school agricultural education laboratories. Fifty-two, or 12.0 percent, of which 32, or 14.8 percent were females, responded in this manner.

The means of the competencies in this area, for total number of respondents, ranged from 3.44 to 4.02, or average to above average. Males rated themselves, on the average, lowest in maintaining a filing system, with a mean of 3.40, and highest, with a mean of 3.99, in using a variety of teaching techniques and providing guidance to students. Females also rated themselves lowest in maintaining a filing system, with a mean of 3.48, and highest in using a variety of teaching techniques, with a mean of 4.04.

Females rated themselves higher than males in five competencies: preparing daily lesson plans, using a variety of teaching techniques, using a variety of audiovisual aids, obtaining instructional materials, and maintaining a filing system. Males rated themselves higher in the remaining six competencies: evaluating student performance, maintaining student discipline, maintaining an inventory of departmental equipment, maintaining school agricultural education laboratories, providing for safety needs of students, and providing guidance to students. The overall self-perceived teaching effectiveness for the competency area of classroom and laboratory instruction for both male and female respondents was 3.77, or average. For male vocational agriculture/agribusiness teachers, the mean was 3.78 and for females, 3.75. Table 14 reports these findings.

When comparing the self-perceived teaching effectiveness by the sex of the respondent, only two competencies were significant at the .05 level. The two competencies were preparing daily lesson plans and maintaining student discipline. The first competency was rated significantly higher by females and the second, significantly higher by males. These findings are presented in Table 15. Analysis of

Table 14. Ratings of Self-Perceived Effectiveness of Vocational Agriculture/Agribusiness Teachers on Competencies in the Competency Area of Classroom and Laboratory Instruction

Competencies in Classroom and Laboratory Instruction	N						DOES NOT APPLY						X̄ and S.D.*					
	Female Respondents		Male Respondents		Total Respondents		Female Respondents		Male Respondents		Total Respondents		Female Respondents		Male Respondents		Total Respondents	
	No.	Pct.	No.	Pct.	No.	Pct.	No.	Pct.	No.	Pct.	No.	Pct.	X̄	S.D.	X̄	S.D.	X̄	S.D.
1. Prepare daily lesson plans	212	98.1	211	97.2	423	97.7	3	1.4	4	1.8	7	1.6	3.62	.89	3.45	.86	3.53	.88
2. Use a variety of teaching techniques, such as lectures, field trips, resource, persons, group discussions, etc.	215	99.5	215	99.1	430	99.3	1	0.5	1	0.5	2	0.5	4.04	.81	3.99	.80	4.02	.80
3. Use a variety of audiovisual aids, such as slide projectors, filmstrip projectors, 16mm film projectors, overhead projectors, etc.	215	99.5	216	99.5	431	99.5	1	0.5	1	0.5	2	0.5	3.90	.86	3.88	.87	3.89	.87
4. Obtain instructional materials	216	100.0	216	99.5	432	99.8	0	0.0	0	0.0	0	0.0	3.93	.79	3.90	.76	3.91	.77
5. Evaluate student performance	215	99.5	215	99.1	430	99.3	0	0.0	0	0.0	0	0.0	3.76	.72	3.79	.67	3.77	.70
6. Maintain student discipline	213	98.6	215	99.1	428	98.8	0	0.0	2	0.9	2	0.5	3.65	.81	3.93	.78	3.79	.81
7. Maintain an inventory of departmental equipment	202	93.5	209	96.3	411	94.9	12	5.5	5	2.3	17	3.9	3.51	.93	3.62	.85	3.57	.89
8. Maintain a filing system	211	97.7	214	98.6	425	98.2	4	1.8	1	0.5	5	1.2	3.48	.93	3.40	.88	3.44	.91
9. Maintain school agricultural education laboratories	181	83.8	194	89.4	375	86.6	32	14.8	20	9.2	52	12.0	3.64	.86	3.77	.89	3.71	.88
10. Provide for safety needs of students	211	97.7	215	99.1	426	98.4	4	1.8	1	0.5	5	1.2	3.72	.82	3.82	.82	3.77	.83
11. Provide guidance to students	213	98.6	214	98.6	427	98.6	1	0.5	2	0.9	3	0.7	3.97	.83	3.99	.75	3.98	.79
Overall Self-Perceived Effectiveness of the Classroom and Laboratory Instruction Competency Area	216	100.0	217	100.0	433	100.0							3.75	.51	3.78	.50	3.77	.50

*Based on a five-point rating scale of 1 = unsatisfactory, 2 = below average, 3 = average, 4 = above average, and 5 = superior.

Variance Summary Tables for the two significant competencies can be found in Appendix F, Tables A-2 and A-3.

Table 15. Summary Table of the Self-Perceived Effectiveness of Vocational Agriculture/Agribusiness Teachers on Competencies in the Competency Area of Classroom and Laboratory Instruction by the Sex of the Respondents

Competency	F Probability
1. Prepare daily lesson plans	.036*
2. Use a variety of teaching techniques, such as lectures, field trips, resource persons, group discussions, etc.	.517
3. Use a variety of audiovisual aids, such as slide projectors, filmstrip projectors, 16mm film projectors, overhead projectors, etc.	.847
4. Obtain instructional materials	.709
5. Evaluate student performance	.681
6. Maintain student discipline	.000*
7. Maintain an inventory of departmental equipment	.243
8. Maintain a filing system	.387
9. Maintain school agricultural education laboratories	.124
10. Provide for safety needs of students	.193
11. Provide guidance to students	.793

*Significant at the .05 level of probability

FFA

In the competency area of FFA, the number of respondents performing the competencies ranged from 345, or 79.7 percent, to 376, or 86.8 percent. Fifty-one, or 11.8 percent, to 84, or 19.4 percent, reported that performing a competency did not apply to them. More females than males responded this way for each competency. Supervise students in the conduct of banquets was the competency in which most, 84, or 19.4 percent, responded as not pertaining to their program.

The means of the competencies in this area for total number of respondents ranged from 3.44 to 3.73. Males rated themselves lowest with a mean 3.57 in supervising students in developing a program of activities and highest with a mean of 3.85 in assisting students in the conduct of FFA fund-raising activities. Females rated themselves lowest with a mean of 3.30 for the same competency, that of supervising students in developing a program of activities. They rated themselves highest on the average, with a mean of 3.67 in assisting students in participating in competitive activities.

The overall self-perceived teaching effectiveness for the competency area of FFA for both male and female respondents was 3.60. For male respondents, the mean was 3.72 and for female vocational agriculture/agribusiness teachers, the mean was 3.47. Males rated themselves higher than females for all eight competencies. Table 16 reports these findings.

Of the eight competencies on which males rated themselves higher, all but one, that of assisting students in participating in competitive activities, were significant at the .05 level. These findings are presented in Table 17. The Analysis of Variance Summary Tables for the seven competencies which are significant can be found in Appendix F, Tables A-4 through A-10.

Table 16. Ratings of Self-Perceived Effectiveness of Vocational Agriculture/Agribusiness Teachers on Competencies in the Competency Area of FFA

Competencies in FFA	N						DOES NOT APPLY						X̄ and S.D.*					
	Female Respondents		Male Respondents		Total Respondents		Female Respondents		Male Respondents		Total Respondents		Female Respondents		Male Respondents		Total Respondents	
	No.	Pct.	No.	Pct.	No.	Pct.	No.	Pct.	No.	Pct.	No.	Pct.	X̄	S.D.	X̄	S.D.	X̄	S.D.
1. Orient student to the FFA	182	84.3	194	89.4	376	86.8	30	13.9	21	9.7	51	11.8	3.49	1.03	3.77	1.04	3.64	1.03
2. Supervise students in developing a program of activities	179	82.9	195	89.9	374	86.4	36	16.7	20	9.2	56	12.9	3.30	.99	3.57	1.01	3.44	1.01
3. Prepare students for leadership roles in the FFA	179	82.9	193	88.9	372	85.9	35	16.2	22	10.1	57	13.2	3.32	.96	3.69	1.01	3.51	1.00
4. Assist students in conducting FFA meetings	178	82.4	191	88.0	369	85.2	36	16.7	24	11.1	60	13.9	3.52	.93	3.78	.94	3.66	.94
5. Supervise students in advancing in FFA membership	175	81.0	190	87.5	365	84.3	40	18.5	23	10.6	63	14.5	3.31	.97	3.65	.95	3.49	.97
6. Assist students in participating in competitive activities	182	84.3	193	88.9	375	86.6	33	15.3	20	9.2	53	12.2	3.66	1.03	3.78	.98	3.73	1.00
7. Assist students in the conduct of FFA fund-raising activities	178	82.4	185	85.2	363	83.8	37	17.1	28	12.9	65	15.0	3.59	1.01	3.85	.97	3.72	1.00
8. Supervise students in the conduct of banquets	164	75.9	181	83.4	345	79.7	50	23.1	34	15.7	84	19.4	3.56	1.11	3.83	1.07	3.70	1.09
Overall Self-Perceived Effectiveness of the FFA Competency Area	187	43.2	199	91.[illegible]	386	89.1	29	13.4	18	8.3	47	10.8	3.47	.82	3.72	.87	3.60	.85

*Based on a five-point rating scale of 1 = unsatisfactory, 2 = below average, 3 = average, 4 = above average and 5 = superior.

Table 17. Summary Table of the Self-Perceived Teaching Effectiveness of Vocational Agriculture/Agribusiness Teachers on Competencies in the Competency Area of FFA by the Sex of the Respondents

Competency	F Probability
1. Orient students to the FFA	.008*
2. Supervise students in developing a program of activities	.009*
3. Prepare students for leadership roles in the FFA	.000*
4. Assist students in conducting FFA meetings	.008*
5. Supervise students in advancing in FFA membership	.001*
6. Assist students in participating in competitive activities	.225
7. Assist students in the conduct of FFA fund raising activities	.011*
8. Supervise students in the conduct of banquets	.019*

*Significant at the .05 level of probability

Supervised Occupational Experience Programs

The number of respondents performing competencies in the competency area of supervised occupational experience programs ranged from 283, or 65.4 percent, to 369, or 85.2 percent. Between 58 and 136 of the respondents reported that performing a competency did not apply to them. More females than males responded this way for each competency. The competency, supervise training stations, was circled as not applying by 136, or 31.4 percent, of the respondents. Of these 79, or 36.6 percent, of the females and 57, or 26.3 percent, of the males responded in this manner. Placing students in training stations was a competency in which 134, or 30.9 percent, of the respondents replied as not applying to them. Also, 131, or 30.2 percent, indicated that obtaining training stations did not apply to them.

The means of the competencies in the competency area of supervised occupational experience programs, for the total number of respondents, ranged from 3.12 to 3.50. Males rated themselves lowest with a mean of 3.17 in supervising training stations and highest, with a mean of 3.57, in assisting students in recordkeeping. Females rated themselves lowest with a mean of 3.02 in developing training plans and highest with a mean of 3.47 in establishing supervised occupational experience programs.

The overall self-perceived teaching effectiveness for this competency area for both male and female respondents was 3.34. For female respondents the mean was 3.30 and for male respondents, 3.38. Males rated themselves higher than females for all six competencies. Table 18 reports these findings.

None of the six competencies on which males rated themselves higher were significant at the .05 level. Table 19 reports these findings.

Adult Education

In the competency area of adult education, the number of male and female respondents performing the competencies ranged from 214, or 49.4 percent, to 243, or 56.1 percent. The number of respondents reporting that performing a competency did not apply to them ranged from 177, or 40.9 percent, to 202, or 46.6 percent. In other words, nearly one-half of the respondents (202, or 46.6 percent) reported

Table 18. Ratings of Self-Perceived Effectiveness of Vocational Agriculture/Agribusiness Teachers on Competencies in the Competency Area of Supervised Occupational Experience

Competencies in Supervised Occupational Experience	N						DOES NOT APPLY						$\bar{X}$ and S.D.					
	Females Respondents		Males Respondents		Total Respondents		Females Respondents		Males Respondents		Total Respondents		Female Respondents		Male Respondents		Total Respondents	
	No.	Pct.	No.	Pct.	No.	Pct.	No.	Pct.	No.	Pct.	No.	Pct.	$\bar{X}$	S.D.	$\bar{X}$	S.D.	$\bar{X}$	S.D.
1. Establish supervised occupational experience programs	172	79.6	187	86.2	359	82.9	39	18.1	28	12.9	67	15.5	3.47	.99	3.53	.93	3.50	.96
2. Obtain training stations	133	61.6	159	73.3	292	67.4	78	36.1	53	24.4	131	30.3	3.14	.98	3.31	1.00	3.23	.99
3. Place students in training programs	131	60.6	159	73.3	290	67.0	80	37.0	54	24.9	134	30.9	3.13	1.05	3.31	1.00	3.23	1.02
4. Develop training plans	136	63.0	162	74.6	298	68.8	76	35.2	50	23.0	126	29.1	3.02	1.02	3.20	.95	3.12	.98
5. Supervise training station	130	60.2	153	70.5	283	65.4	79	36.6	57	26.3	136	31.4	3.14	1.02	3.17	.94	3.16	.98
6. Assist students in recordkeeping	180	100.0	189	87.1	369	85.2	32	14.8	26	12.0	58	13.4	3.41	1.01	3.57	.90	3.49	.96
Overall Self-Perceived Effectiveness of the Supervised Occupational Experience Competency Area	188	87.0	194	89.4	382	88.2	28	13.0	23	10.6	51	11.8	3.30	.85	3.38	.82	3.34	.83

*Based on a five-point rating scale of 1 = unsatisfactory, 2 = below average, 3 = average, 4 = above average, and 5 = superior.

Table 19. Summary Table of the Self-Perceived Teaching Effectiveness of Vocational Agriculture/Agribusiness Teachers on Competencies in the Competency Area of Supervised Occupational Experience Programs by the Sex of the Respondents

Competency	F Probability
1. Establish supervised occupational experience programs	.571
2. Obtain training stations	.151
3. Place students in training programs	.136
4. Develop training plans	.108
5. Supervise training stations	.779
6. Assist students in recordkeeping	.115

that organizing an adult education program did not apply. Another 202, or 46.6 percent, replied that using teaching strategies appropriate for adults did not apply. Two hundred and one, or 46.4 percent, responded that using resource persons in the adult program did not apply. More females than males responded this way for each competency.

The means of the competencies in this area, for the total number of respondents, ranged from 3.16 to 3.30, or average. Females rated themselves lowest with a mean of 2.93, or below average, for the competency assessing needs of adults in the community and highest with a mean of 3.20 in using resource persons in the adult program. Males rated themselves lowest with a mean of 3.31 in assessing needs of adults in the community and highest with a mean of 3.39 in using teaching strategies appropriate for adults.

Table 20. Ratings of Self-Perceived Effectiveness of Vocational Agriculture/Agribusiness Teachers on Competencies in the Competency Area of Adult Education

Competencies in Adult Education	N						DOES NOT APPLY						X and S.D.*					
	Female Respondents		Male Respondents		Total Respondents		Female Respondents		Male Respondents		Total Respondents		Female Respondents		Male Respondents		Total Respondents	
	No.	Pct.	No.	Pct.	No.	Pct.	No.	Pct.	No.	Pct.	No.	Pct.	X	S.D.	X	S.D.	X	S.D.
1. Assess needs of adults in the community	99	45.8	144	66.4	243	56.1	111	51.4	66	30.4	177	40.9	2.93	1.03	3.31	.99	3.16	1.02
2. Organize an adult education program	88	40.7	126	58.1	214	49.4	117	54.2	85	39.2	202	46.6	3.03	1.15	3.36	1.15	3.22	1.16
3. Use resource persons in the adult program	92	42.6	125	57.6	217	50.1	115	53.2	86	39.6	201	46.4	3.20	1.12	3.36	1.11	3.29	1.12
4. Use teaching strategies appropriate for adults	93	43.1	124	57.1	217	50.1	115	53.2	87	40.1	202	46.6	3.18	1.12	3.39	1.04	3.30	1.08
Overall Self-Perceived Effectiveness of the Adult Education Competency Area	107	49.5	148	68.2	255	58.9	109	50.5	69	31.8	178	41.1	3.10	1.00	3.31	.98	3.22	.99

*Based on a five-point rating scale of 1 = unsatisfactory, 2 = below average, 3 = average, 4 = above average, and 5 = superior.

The overall self-perceived teaching effectivness for the competency area of adult education for both male and female respondents was the lowest for any competency area with a mean of 3.22, or average. For female vocational agriculture/agribusiness teachers, the overall mean for this competency area was 3.10 and for males it was higher with a mean of 3.31. Females rated themselves lower than males on all five competencies listed under the competency area of adult education. Table 20 reports these findings.

Two of the four competencies were significant at the .05 level. These two competencies were assessing needs of adults in the community and organizing an adult education program, on both of which females rated themselves lower. Table 21 reports these findings. The Analysis of Variance Summary Tables for the two significant competencies can be found in Appendix F, Tables A-11 and A-12.

Table 21. Summary Table for the Self-Perceived Teaching Effectiveness of Vocational Agriculture/Agribusiness Teachers on Competencies in the Competency Area of Adult Education by the Sex of the Respondents

Competency	F Probability
1. Assess needs of adults in the community	.004*
2. Organize an adult education program	.042*
3. Use resource persons in the adult education program	.284
4. Use teaching strategies appropriate for adults	.164

*Significant at the .05 level of probability

Public Relations, Advisory Committees, and Professionalism

For the competency area of public relations, advisory committees, and professionalism, the number of male and female respondents performing the competencies ranged from 397, or 91.7 percent, to 427, or 98.6 percent. Respondents reporting a competency as not applying to their program ranged from six, or 1.4 percent, to 33, or 7.6 percent. Thirty-three, or 7.6 percent, of which 25, or 11.6 percent, were females, responded that using an advisory committee did not apply to their programs. More females than males responded this way for each competency.

The means of the competencies in this area, for the total number of respondents, ranged from 3.32 to 4.01, or average to above average. Males rated themselves lowest with a mean of 3.34 in using an advisory committee and highest with a mean of 3.98 in attending professional meetings. Females rated themselves lowest for the same competency, using an advisory committee, with a mean of 3.30 and highest for the same competency, attending professional meetings, with a mean of 4.05, or above average.

The overall self-perceived teaching effectiveness for the competency area of public relations, advisory committees, and professionalism for both male and female respondents was 3.70, or average. For females, the overall mean for this competency area was 3.68 and for male respondents, 3.71. Females rated themselves lower for three of the four competencies. The competency in which females rated themselves higher was that of attending professional meetings, with a mean of 4.05. Table 22 shows these findings.

Table 22. Ratings of Self-Perceived Effectiveness of Vocational Agriculture/Agribusiness Teachers on Competencies in the Competency Area of Public Relations, Advisory Committees, and Professionalism

Competencies in Public Relations, Advisory Committees, and Professionalism	N						DOES NOT APPLY						X and S.D.*					
	Female Respondents		Male Respondents		Total Respondents		Female Respondents		Male Respondents		Total Respondents		Female Respondents		Male Respondents		Total Respondents	
	No.	Pct.	No.	Pct.	No.	Pct.	No.	Pct.	No.	Pct.	No.	Pct.	X	S.D.	X	S.D.	X	S.D.
1. Establish good public relations with community members	211	97.7	216	99.5	427	98.6	5	2.3	1	0.5	6	1.4	3.90	.87	3.93	.82	3.91	.84
2. Keep the community up to date through publicity	208	96.3	214	98.6	422	97.5	8	3.7	3	1.4	11	2.5	3.49	.97	3.58	.91	3.54	.94
3. Use an advisory committee	190	88.0	207	95.4	397	91.7	25	11.6	8	3.7	33	7.6	3.29	1.14	3.34	1.17	3.32	1.15
4. Attend professional meetings	211	97.7	215	99.1	426	98.4	5	2.3	2	0.9	7	1.6	4.05	.93	3.98	.97	4.01	.95
Overall Self-Perceived Effectiveness of the Public Relations, Advisory Committee, and Professionalism Competency Area	214	99.1	217	100.0	431	99.5	2	0.9	0	0.0	2	0.5	3.68	.77	3.71	.76	3.70	.77

*Based on a five point rating scale of 1 = unsatisfactory, 2 = below average, 3 = average, 4 = above average, and 5 = superior.

None of the four competencies in the competency area of public relations, advisory committees, and professionalism were significant at the .05 level. Table 23 reports these findings.

Table 23. Summary Table for the Self-Perceived Teaching Effectiveness of Vocational Agriculture/Agribusiness Teachers on Competencies in the Competency Area of Public Relations, Advisory Committees, and Professionalism, by the Sex of the Respondents

Competency	F Probability
1. Establish good public relations with community members	.674
2. Keep the community up to date through publicity	.284
3. Use an advisory committee	.709
4. Attend professional meetings	.452

Comparison of the Self-Perceived Teaching Effectiveness With Selected Independent Variables

The self-perceived teaching effectiveness, or dependent variable, was compared with the sex of the respondent and several independent variables, in order to achieve the objectives of the study. The independent variables included the respondents' educational level, enrollment in vocational agriculture/agribusiness and membership in the FFA. The three variables, self-perceived teaching effectiveness, sex of the respondent, plus one of the three independent variables were compared independently and also as dependent upon each other (two-way interaction). For example, the sex of the respondent was compared with the self-perceived teaching effectiveness and the educational level of the respondent was compared with the self-perceived teaching effectiveness. The two-way interaction, then, compared the self-perceived teaching effectiveness with the sex of the respondent and educational level of the respondent.

The F values may be different when considering the main effect of the sex of the respondent and the self-perceived teaching effectiveness, than when presented in the previous section, due to unequal numbers of respondents.

The following sections are presented according to the independent variables: educational level, enrollment in vocational agriculture/agribusiness, and membership in the FFA.

Comparison of the Self-Perceived Teaching Effectiveness with the Sex and Educational Level of the Respondent. In this section, the findings on self-perceived teaching effectiveness are compared on the basis of the sex and educational level of the respondents. The educational levels used were the baccalaureate and masters degrees.

Four of the six competencies in the competency area of program planning were rated higher by males than females. However, only one was significant at the .05 level, that of preparing departmental budgets. All six competencies in this area were rated higher by those respondents with masters degrees than those with baccalaureate degrees. Two competencies, preparing departmental budgets and completing required report forms, were significant at the .05 level. Only one competency, that of completing required report forms, produced a significant interaction at the .05 level when both the sex of the respondent and the educational level of the respondent were taken into account. This was that males with masters degrees tended to rate themselves higher than males with baccalaureate degrees.

The means and F probabilities for the competency area, program planning, compared to the sex and educational level of the respondent can be found in Table 24. Analysis of Variance Summary Tables for the competencies which were significant at the .05 level can be found in Appendix F, Tables B-1 and B-2.

The findings for the competency area of classroom and laboratory instruction showed one competency, preparing daily lesson plans, as significant at the .05 level when compared with the sex of the respondents. Females rated themselves higher than males on this and six other competencies. Four competencies were significant at the .05 level when comparing the educational level of the respondent with the self-perceived teaching effectiveness. These competencies included obtaining instructional materials, maintaining student discipline, maintaining a filing system, and providing guidance to students. Those respondents with masters degrees rated themselves higher than those with baccalaureate degrees on seven competencies in this competency area. Only one competency, that of maintaining student discipline, produced a significant interaction at the .05 level when both the sex of the respondent and the educational level of the respondent were taken into account. This was that females with masters degrees tended to rate themselves higher than females with baccalaureate degrees. Table 25 reports these findings. Analysis of Variance Summary Tables for each competency that was significant at the .05

Table 24. Means and F Probabilities for the Self-Perceived Teaching Effectiveness for the Competency Area of Program Planning When Compared with the Sex and Educational Level of the Respondents

Program Planning Competencies	SEX			EDUCATIONAL LEVEL			INTERACTION
	Female Mean**	Male Mean**	F Probability	B.S. Mean**	M.S. Mean**	F Probability	F Probability
1. Develop written lesson plans	3.67	3.54	0.070	3.57	3.70	0.117	0.368
2. Determine student needs	3.83	3.85	0.969	3.79	3.95	0.052	0.708
3. Prepare departmental budgets	3.41	3.77	0.015*	3.40	3.85	0.001*	0.154
4. Complete required report forms	3.79	3.79	0.312	3.69	4.02	0.012*	0.025*
5. Maintain a summer program of work	3.79	3.89	0.144	3.80	3.93	0.588	0.123
6. Evaluate the vocational agriculture/agribusiness program	3.62	3.72	0.252	3.63	3.76	0.171	0.843

*Significant at the .05 level of probability

**Based on a five-point rating scale of 1 = unsatisfactory, 2 = below average, 3 = average, 4 = above average, and 5 = superior.

Table 25. Means and F Probabilities for the Self-Perceived Teaching Effectiveness for the Competency Area of Classroom and Laboratory Instruction by Sex and Educational Level of the Respondents

Classroom and Laboratory Instruction Competencies	SEX Female Mean**	SEX Male Mean**	SEX F Probability	EDUCATIONAL LEVEL B.S. Mean**	EDUCATIONAL LEVEL M.S. Mean**	EDUCATIONAL LEVEL F Probability	INTERACTION F Probability
1. Prepare daily lesson plans	3.68	3.43	0.012*	3.52	3.67	0.139	0.954
2. Use a variety of teaching techniques	4.07	4.00	0.118	4.01	4.11	0.178	0.061
3. Use a variety of audiovisual aids	3.95	3.89	0.366	3.87	4.04	0.078	0.534
4. Obtain instructional materials	3.95	3.89	0.160	3.86	4.07	0.008*	0.140
5. Evaluate student performance	3.79	3.77	0.794	3.76	3.82	0.472	0.840
6. Maintain student discipline	3.70	3.89	0.246	3.73	3.94	0.009*	0.041*
7. Maintain an inventory of departmental equipment	3.55	3.65	0.512	3.55	3.71	0.104	0.383
8. Maintain a filing system	3.53	3.41	0.183	3.39	3.66	0.010*	0.666

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Table 25. Means and F Probabilities for the Self-Perceived Teaching Effectiveness for the Competency Area of Classroom and Laboratory Instruction by Sex and Educational Level of the Respondents (Continued)

Classroom and Laboratory Instruction Competencies	SEX			EDUCATIONAL LEVEL			INTERACTION
	Female Mean**	Male Mean**	F Probability	B.S. Mean**	M.S. Mean**	F Probability	F Probability
9. Maintain school agricultural education laboratories	3.65	3.75	0.403	3.65	3.81	0.136	0.790
10. Provide for safety needs of students	3.73	3.79	0.281	3.72	3.86	0.189	0.321
11. Provide guidance to students	3.98	3.92	0.152	3.89	4.09	0.018*	0.058

*Significant at the .05 level of probability

**Based on a five-point rating scale of 1 = unsatisfactory, 2 = below average, 3 = average, 4 = above average, and 5 = superior.

level for the competency area of classroom and laboratory instruction can be found in Appendix F, Tables B-3 through B-7.

The findings for the competency area, FFA, showed four competencies to be significant at the .05 level. These four competencies included orienting students to the FFA, preparing students for leadership roles in the FFA, supervising students in advancing in FFA membership, and supervising students in the conduct of banquets. No competencies were significant at the .05 level in comparing the independent variable, educational level, with self-perceived teaching effectiveness of the respondents. Four competencies, orienting students to the FFA, preparing students for leadership roles in the FFA, supervising students in advancing in FFA membership, and supervising students in the conduct of banquets, were found to be significant at the .05 level when compared with the sex of the respondents. Male respondents rated themselves higher than female respondents for all competencies in this area. Only one competency, that of supervising students in the conduct of banquets, was found to be significant at the .05 level in the two-way interaction. This was that males with masters degrees tended to rate themselves higher than males with baccalaureate degrees, while females with baccalaureate degrees tended to rate themselves higher than females with masters degrees. Analysis of Variance Summary Tables for each competency that was significant at the .05 level for the competency area of FFA can be found in Appendix F, Tables B-8 through B-11.

No competencies in the competency area of supervised occupational experience programs were found to be significant at the .05 level in comparing the self-perceived teaching effectiveness with the sex of

Table 26. Means and F Probabilities for the Self-Perceived Teaching Effectiveness for the Competency Area of FFA When Compared with the Sex and Educational Level of the Respondents

FFA Competencies	SEX			EDUCATIONAL LEVEL			INTERACTION
	Female Mean**	Male Mean**	F Probability	B.S. Mean**	M.S. Mean**	F Probability	F Probability
1. Orient students to the FFA	3.53	3.81	0.017*	3.64	3.74	0.521	0.666
2. Supervise students in developing a program of activities	3.35	3.55	0.071	3.38	3.61	0.078	0.714
3. Prepare students for leadership roles in the FFA	3.37	3.67	0.025*	3.46	3.67	0.077	0.734
4. Assist students in conducting FFA meetings	3.57	3.80	0.083	3.67	3.71	0.629	0.623
5. Supervise students in advancing in FFA membership	3.36	3.66	0.031*	3.51	3.51	0.896	0.518
6. Assist students in participating in competitive activities	3.69	3.81	0.142	3.75	3.75	0.839	0.201

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Table 26. Means and F Probabilities for the Self-Perceived Teaching Effectiveness for the Competency Area of FFA When Compared with the Sex and Educational Level of the Respondents (Continued)

FFA Competencies	SEX			EDUCATIONAL LEVEL			INTERACTION
	Female Mean**	Male Mean**	F Probability	B.S. Mean**	M.S. Mean**	F Probability	F Probability
7. Assist students in the conduct of FFA fund raising activities	3.64	3.85	0.089	3.71	3.81	0.425	0.943
8. Supervise students in the conduct of banquets	3.62	3.82	0.015*	3.70	3.76	0.912	0.015*

*Significant at the .05 level of probability

**Based on a five-point rating scale of 1 = unsatisfactory, 2 = below average, 3 = average, 4 = above average, and 5 = superior.

the respondent, the educational level of the respondent, or the two-way interaction. Table 27 reports these findings.

Only one competency in the competency area of adult education was found to be significant at the .05 level, that of assessing needs of adults in the community. This competency was significant when comparing the self-perceived teaching effectiveness with the sex of the respondents. Male respondents rated themselves higher than female respondents for this competency and also the remaining three in this competency area. Table 28 reports these findings. Analysis of Variance Summary Tables for the significant competency in the competency area of adult education can be found in Appendix F, Table B-12.

No competencies in the competency area of public relations, advisory committees, and professionalism were found to be significant at the .05 level, in comparing the self-perceived teaching effectiveness with the sex of the respondent, the educational level of the respondent, or the two-way interaction. However, female respondents rated themselves higher on only one competency in this competency area, that of attending professional meetings. The respondents with masters degrees tended to rate themselves higher in this competency area. Table 29 reports these findings.

Comparison of the Self-Perceived Teaching Effectiveness With the Sex and Enrollment in Vocational Agriculture/Agribusiness of the Respondent. The independent variables used in the comparison of the self-perceived teaching effectiveness and the sex of the respondent was that of enrollment in vocational agriculture/agri-

Table 27. Means and F Probabilities for the Self-Perceived Teaching Effectiveness for the Competency Area of Supervised Occupational Experience Programs When Compared with the Sex and Educational Level of the Respondents

Supervised Occupational Experience Competencies	SEX			EDUCATIONAL LEVEL			INTERACTION
	Female Mean*	Male Mean*	F Probability	B.S. Mean*	M.S. Mean*	F Probability	F Probability
1. Establish supervised occupational experience programs	3.47	3.53	0.731	3.47	3.56	0.429	0.786
2. Obtain training stations	3.13	3.23	0.505	3.12	3.30	0.203	0.969
3. Place students in training stations	3.11	3.20	0.427	3.12	3.24	0.502	0.668
4. Develop training plans	3.06	3.11	0.747	3.01	3.26	0.067	0.919
5. Supervise training stations	3.17	3.08	0.528	3.04	3.29	0.088	0.984
6. Assist students in recordkeeping	3.42	3.56	0.267	3.49	3.49	0.986	0.916

*Based on a five-point rating scale of 1 = unsatisfactory, 2 = below average, 3 = average, 4 = above average, and 5 = superior.

Table 28. Means and F Probabiliites for the Self-Perceived Teaching Effectiveness for the Competency Area of Adult Education When Compared with the Sex and Educational Level of the Respondents

Adult Education Competencies	SEX			EDUCATIONAL LEVEL			INTERACTION
	Female Mean**	Male Mean**	F Probability	B.S. Mean**	M.S. Mean**	F Probability	F Probability
1. Assess needs of adults in the community	2.92	3.27	0.014*	3.09	3.22	0.552	0.493
2. Organize an adult education program	3.01	3.29	0.235	3.12	3.29	0.264	0.457
3. Use resource persons in the adult education program	3.16	3.30	0.253	3.23	3.26	0.875	0.298
4. Use teaching strategies appropriate for adults	3.24	3.35	0.558	3.26	3.38	0.484	0.882

*Significant at the .05 level of probability

**Based on a five-point rating scale of 1 = unsatisfactory, 2 = below average, 3 = average, 4 = above average, and 5 = superior.

Table 29. Means and F Probabilities for the Self-Perceived Teaching Effectiveness for the Competency Area of Public Relations, Advisory Committees, and Professionalism When Compared with the Sex of the Respondents

Public Relations, Advisory Committees Professionalism Comp.	SEX			EDUCATIONAL LEVEL			INTERACTION
	Female Mean*	Male Mean*	F Probability	B.S. Mean*	M.S. Mean*	F Probability	F Probability
1. Establish good public relations with community members	3.88	3.92	0.785	3.88	3.95	0.454	0.864
2. Keep the community up to date through publicity	3.48	3.56	0.534	3.46	3.65	0.077	0.822
3. Use an advisory committee	3.28	3.28	0.773	3.25	3.25	0.366	0.474
4. Attend professional meetings	4.05	3.97	0.509	3.95	4.15	0.079	0.972

*Based on a five point rating scale of 1 = unsatisfactory, 2 = below average, 3 = average, 4 = above average, and 5 = superior.

business when in high school were compared with those respondents who had not been enrolled in vocational agriculture/agribusiness when in high school.

In the competency area of program planning, male respondents rated themselves higher than female respondents on all but one competency, that of developing written program plans. Only one competency, however, was significant at the .05 level, that of preparing departmental budgets. Those respondents who were enrolled in vocational agriculture/agribusiness when in high school rated themselves higher on three of the six competencies, completing required report forms, maintaining a summer program of work, and evaluating the vocational agriculture/agribusiness program. None of the competencies in this competency area, however, were significant at the .05 level when compared to the enrollment in vocational agriculture/agribusiness on the two-way interaction. Table 30 reports these findings. The Analysis of Variance Summary Table for the significant competency can be found in Appendix F, Table C-1.

Female respondents tied or rated themselves higher than male respondents for five of the eleven competencies in the competency area, classroom and laboratory instruction. Those respondents who were not enrolled in vocational agriculture/agribusiness when in high school rated themselves higher on all eleven competencies than those respondents who were enrolled in vocational agriculture/agribusiness in high school. However, only two competencies were significant at the .05 level. The two significant competencies were maintaining student discipline and providing for safety needs of students.

Table 30. Means and F Probabilities for the Self-Perceived Teaching Effectiveness for the Competency Area of Program Planning When Compared with the Sex and Enrollment in Vocational Agriculture/Agribusiness of the Respondents

Program Planning Competencies	SEX			ENROLLMENT			INTERACTION
	Female Mean**	Male Mean**	F Probability	No Mean**	Yes Mean**	F Probability	F Probability
1. Develop written lesson plans	3.63	3.55	0.527	3.59	3.58	0.766	0.610
2. Determine student needs	3.78	3.88	0.063	3.84	3.82	0.450	0.080
3. Prepare departmental budgets	3.37	3.78	0.000*	3.59	3.58	0.667	0.389
4. Complete required report forms	3.75	3.79	0.442	3.74	3.82	0.666	0.363
5. Maintain a summer program of work	3.79	3.90	0.360	3.80	3.93	0.381	0.763
6. Evaluate the vocational agriculture/agribusiness program	3.60	3.72	0.346	3.65	3.68	0.561	0.551

*Significant at the .05 level of probability

**Based on a five-point rating scale of 1 = unsatisfactory, 2 = below average, 3 = average, 4 = above average, and 5 = superior.

Maintaining student discipline was rated significantly higher by male respondents than female respondents. The competency, providing for safety needs of students, was also rated significantly higher by male respondents and those not enrolled in vocational agriculture/agribusiness when in high school. None of the competencies were significant for the two-way interaction. Table 31 reports these findings. Analysis of Variance Summary Tables for the significant competencies are presented in Appendix F, Tables C-2 and C-3.

For the competency area of FFA, the means indicated that those respondents enrolled in vocational agriculture/agribusiness when in high school rated themselves higher than those respondents who were not for all eleven competencies, and male respondents rated themsleves higher than female respondetns for all but one competency, that of assisting students in participating in competitive activities. However, the competency, preparing students for leadership roles in the FFA, was the only competency significant at the .05 level when compared with the sex of the respondent in which male respondents rated themselves higher than female respondents. Only six of the eight competencies were significant at the .05 level when compared with past enrollment in vocational agriculture/agribusiness. These included orienting students to the FFA, preparing students for leadership roles in the FFA, assisting students in conducting FFA meetings, supervising students in advancing in FFA membership, assisting students in participating in competitive activities, and supervising students in the conduct of banquets, and were rated higher by those respondents who had been enrolled in vocational agriculture/agribusi-

Table 31. Means and F Probabilities for the Self-Perceived Teaching Effectiveness for the Competency Area of Classroom and Laboratory Instruction When Compared with the Sex and Enrollment in Vocational Agriculture/Agribusiness of the Respondents

Classroom and Laboratory Instruction Competencies	SEX			ENROLLMENT			INTERACTION
	Female Mean**	Male Mean**	F Probability	No Mean**	Yes Mean**	F Probability	F Probability
1. Prepare daily lesson plans	3.62	3.46	0.108	3.55	3.52	0.792	0.833
2. Use a variety of teaching techniques	4.02	4.02	0.786	4.06	3.95	0.144	0.483
3. Use a variety of audiovisual aids	3.89	3.89	0.916	3.90	3.86	0.770	0.786
4. Obtain instructional materials	3.91	3.91	0.909	3.94	3.86	0.484	0.747
5. Evaluate student performance	3.74	3.80	0.136	3.79	3.73	0.164	0.060
6. Maintain student discipline	3.63	3.97	0.000*	3.85	3.72	0.136	0.566
7. Maintain a filing system	3.51	3.62	0.117	3.58	3.55	0.454	0.170
8. Maintain an inventory of departmental equipment	3.46	3.42	0.838	3.48	3.38	0.190	0.230

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Table 31. Means and F Probabilities for the Self-Perceived Teaching Effectiveness for the Competency Area of Classroom and Laboratory Instruction When Compared with the Sex and Enrollment in Vocational Agriculture/Agribusiness of the Respondents (Continued)

Classroom and Laboratory Instruction Competencies	SEX			ENROLLMENT			INTERACTION
	Female Mean**	Male Mean**	F Probability	No Mean**	Yes Mean**	F Probability	F Probability
9. Maintain school agricultural education laboratories	3.61	3.81	0.096	3.76	3.63	0.308	0.915
10. Provide for safety needs of students	3.67	3.87	0.008*	3.85	3.66	0.007*	0.133
11. Provide guidance to students	3.95	4.01	0.558	4.01	3.93	0.411	0.960

*Significant at the .05 level of probability

**Based on a five-point rating scale of 1 = unsatisfactory, 2 = below average, 3 = average, 4 = above average, and 5 = superior.

ness when in high school. None were significant at the .05 level for the two-way interaction. Table 32 presents these findings. Analysis of Variance Summary Tables for the significant competencies for the competency area, FFA, can be found in Appendix F, Tables C-4 through C-9.

For the competency area, supervised occupational experience programs, male respondents again rated themselves higher for all six competencies, but only one, that of developing training plans, was significant at the .05 level. Those who were enrolled in vocational agriculture/agribusiness when in high school rated themselves higher for only two competencies, that of establishing a supervised occupational experience program and that of assisting students in recordkeeping. The latter was the only significant competency at the .05 level. None of the competencies were significant at the .05 level for the two-way interaction. Table 33 reports these findings. Analysis of Variance Summary Tables for the two significant competencies can be found in Appendix F, Tables C-10 and C-11.

In the competency area of adult education, male respondents rated themselves higher than female respondents for all the competencies, but were significant at the .05 level for only one, that of organizing an adult education program. Those not enrolled in vocational agriculture/agribusiness when in high school rated themselves higher than those who were enrolled in vocational agriculture/agribusiness for all four competencies. There were no competencies significant for the interaction between sex and enrollment in vocational agriculture/agribusiness of the respondents. Table 34 reports these findings.

Table 32. Means and F Probabilities for the Self-Perceived Teaching Effectiveness for the Competency Area of FFA When Compared with the Sex and Enrollment in Vocational Agriculture/Agribusiness of the Respondents

FFA Competencies	SEX			ENROLLMENT			INTERACTION
	Female Mean**	Male Mean**	F Probability	No Mean**	Yes Mean**	F Probability	F Probability
1. Orient students to the FFA	3.58	3.69	0.341	3.49	3.86	0.006*	0.779
2. Supervise students in developing a program of activities	3.33	3.54	.085	3.38	3.52	0.298	0.788
3. Prepare students for leadership roles in the FFA	3.38	3.63	0.050*	3.40	3.67	0.032*	0.938
4. Assist students in conducting FFA meetings	3.59	3.73	0.266	3.56	3.81	0.030*	0.845
5. Supervise students in advancing in FFA membership	3.39	3.58	0.170	3.35	3.69	0.005*	0.682
6. Assist students in participating in competitive activities	3.75	3.71	0.695	3.59	3.93	0.007*	0.906

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Table 32. Means and F Probabilities for the Self-Perceived Teaching Effectiveness for the Competency Area of FFA When Compared with the Sex and Enrollment in Vocational Agriculture/Agribusiness of the Respondents (Continued)

FFA Competencies	SEX			ENROLLMENT			INTERACTION
	Female Mean**	Male Mean**	F Probability	No Mean**	Yes Mean**	F Probability	F Probability
7. Assist students in the conduct of FFA fund raising activities	3.64	3.82	0.101	3.66	3.83	0.228	0.537
8. Supervise students in the conduct of banquets	3.64	3.77	0.367	3.59	3.88	0.037*	0.981

*Significant at the .05 level of probability

**Based on a five-point rating scale of 1 = unsatisfactory, 2 = below average, 3 = average, 4 = above average, and 5 = superior.

Table 33. Means and F Probabilities for the Self-Perceived Teaching Effectivness for the Competency Area of Supervised Occupational Experience Programs When Compared with the Sex and Enrollment in Vocational Agriculture/Agribusiness of the Respondents

Supervised Occupational Experience Program Competencies	SEX			ENROLLMENT			INTERACTION
	Female Mean**	Male Mean**	F Probability	No Mean**	Yes Mean**	F Probability	F Probability
1. Establish supervised occupational experience programs	3.49	3.51	0.778	3.46	3.56	0.557	0.614
2. Obtain training stations	3.12	3.32	0.090	3.26	3.18	0.395	0.484
3. Place students in training programs	3.12	3.32	0.131	3.24	3.21	0.649	0.589
4. Develop training plans	3.01	3.22	0.042*	3.14	3.08	0.336	0.186
5. Supervise training stations	3.13	3.18	0.550	3.18	3.13	0.605	0.558
6. Assist students in recordkeeping	3.47	3.51	0.927	3.59	3.64	0.027*	0.546

*Significant at the .05 level of probability

**Based on a five-point rating scale of 1 = unsatisfactory, 2 = below average, 3 = average, 4 = above average, and 5 = superior.

Table 34. Means and F Probabilities for the Self-Perceived Teaching Effectiveness for the Competency Area of Adult Education When Compared with the Sex and Enrollment in Vocational Agriculture/Agribusiness of the Respondents

Adult Education Competencies	SEX			ENROLLMENT			INTERACTION
	Female Mean**	Male Mean**	F Probability	No Mean**	Yes Mean**	F Probability	F Probability
1. Assess needs of adults in the community	2.92	3.32	0.177	3.17	3.14	0.595	0.271
2. Organize an adult education program	2.98	3.40	0.017*	3.30	3.12	0.160	0.290
3. Use resource persons in the adult education program	3.16	3.38	0.114	3.34	3.22	0.267	0.314
4. Use teaching strategies appropriate for adults	3.14	3.42	0.072	3.35	3.22	0.242	0.339

*Significant at the .05 level of probability

**Based on a five-point rating scale of 1 = unsatisfactory, 2 = below average, 3 = average, 4 = above average, and 5 = superior.

An Analysis of Variance Summary Table for the significant competency can be found in Appendix F, Table C-12.

None of the competencies in the competency area, public relations, advisory committees, and professionalism were found to be significant at the .05 level when compared with the sex of the respondents, enrollment in vocational agriculture/agribusiness of the respondents, or interaction of the two. However, female respondents rated themselves or tied with the male respondents for all four competencies, and those enrolled in vocational agriculture/agribusiness when in high school rated themselves higher than those who were not. Table 35 reports these findings.

The Self-Perceived Teaching Effectiveness Compared With the Sex of the Respondents and Membership in the FFA. The variable used in the comparison of the self-perceived teaching effectiveness for this section was that of membership in the FFA. Those respondents who had been members of the FFA were compared with those who had not.

In the competency area of program planning, the competency, determining students needs, was significant at the .05 level in the two-way interaction. The interaction between sex and enrollment in FFA may be accounted for in that the mean for males enrolled in FFA was greater (though not statistically significant) than those not enrolled, while the mean for females enrolled in FFA was lower (though not statistically significant) than those not enrolled. The competency, preparing departmental budgets, was significant when compared to the sex of the respondent. Male respondents rated themselves higher for this competency and for all other competencies in

Table 35. Means and F Probabilities for the Self-Perceived Teaching Effectiveness for the Competency Area of Public Relations, Advisory Committees, and Professionalism When Compared with the Sex and Enrollment in Vocational Agriculture/Agribusiness of the Respondents

Public Relations, Advisory Committees, and Professionalism Comp.	SEX			ENROLLMENT			INTERACTION
	Female Mean**	Male Mean**	F Probability	No Mean**	Yes Mean**	F Probability	F Probability
1. Establish good public relations	3.93	3.91	0.772	3.89	3.98	0.575	0.347
2. Keep the community up to date through publicity	3.55	3.53	0.834	3.45	3.70	0.062	0.381
3. Use an advisory committee	3.32	3.32	0.514	3.28	3.38	0.927	0.116
4. Attend professional meetings	4.09	3.93	0.250	3.93	4.14	0.108	0.460

*Based on a five-point rating scale of 1 = unsatisfactory, 2 = below average, 3 = average, 4 = above average, and 5 = superior.

this area except for developing written program plans. Those enrolled in the FFA in high school also rated themselves higher than those not enrolled, or tied, for all competencies except for developing written program plans. None were significant at the .05 level, however, when compared to this variable. Table 36 reports these findings. Analysis of Variance Summary Tables for the significant competencies in the competency area, program planning, can be found in Appendix F, Tables D-1 and D-2.

For the competency area, classroom and laboratory instruction, male respondents rated themselves higher than female respondents on six of the eleven competencies; however, only two of these competencies were significant at the .05 level. These were maintaining student discipline and providing for safety needs of students. None of the competencies in this competency area were significant at the .05 level, but all were rated higher by those respondents who were not enrolled in the FFA than those respondents who were members of the FFA. The two variables, sex of the respondents, and enrollment of the respondent in FFA, produced a significant (.05 level) interaction with the competency, evaluating student performance. The interaction between sex and enrollment in FFA may be accounted for in that the mean for males enrolled in FFA was greater (though not statistically significant) than those not enrolled, while the mean for females enrolled in FFA was lower (though not statistically significant) than those not enrolled. Table 37 reports these findings. Analysis of Variance Summary Tables for those competencies

Table 36. Means and F Probabilities for the Self-Perceived Teaching Effectiveness for the Competency Area of Program Planning When Compared with the Sex and Membership in the FFA of the Respondents

Program Planning Competencies	SEX			MEMBERSHIP			INTERACTION
	Female Mean**	Male Mean**	F Probability	No Mean**	Yes Mean**	F Probability	F Probability
1. Develop written program plans	3.63	3.55	0.626	3.60	3.58	0.659	0.425
2. Determine student needs	3.80	3.88	0.051	3.84	3.84	0.444	0.021*
3. Prepare departmental budgets	3.37	3.80	0.000*	3.60	3.61	0.609	0.174
4. Complete required report forms	3.74	3.78	0.392	3.72	3.83	0.632	0.211
5. Maintain a summer program of work	3.80	3.89	0.465	3.78	3.95	0.256	0.833
6. Evaluate the vocational agriculture/agribusiness program	3.60	3.72	0.260	3.65	3.68	0.751	0.850

*Significant at the .05 level of probability

**Based on a five-point rating scale of 1 = unsatisfactory, 2 = below average, 3 = average, 4 = above average, and 5 = superior.

Table 37. Means and F Probabilities for the Self-Perceived Teaching Effectiveness for the Competency Area of Classroom and Laboratory Instruction When Compared with the Sex and Membership in the FFA of the Respondents

Classroom and Laboratory Instruction Competencies	SEX			MEMBERSHIP			INTERACTION
	Female Mean**	Male Mean**	F Probability	No Mean**	Yes Mean**	F Probability	F Probability
1. Prepare daily lesson plans	3.62	3.46	0.209	3.55	3.53	0.748	0.685
2. Use a variety of teaching techniques	4.04	4.00	0.962	4.04	3.99	0.390	0.369
3. Use a variety of audiovisual aids	3.90	3.88	0.849	3.90	3.88	0.701	0.461
4. Obtain instructional materials	3.93	3.89	0.662	3.92	3.90	0.868	0.835
5. Evaluate student performance	3.75	3.79	0.143	3.79	3.73	0.141	0.028*
6. Maintain student discipline	3.63	3.97	0.000*	3.85	3.71	0.059	0.216
7. Maintain an inventory of departmental equipment	3.52	3.62	0.144	3.58	3.56	0.510	0.207
8. Maintain a filing system	3.47	3.43	0.912	3.48	3.40	0.258	0.300

(Continued on next page)

Table 37. Means and F Probabilities for the Self-Perceived Teaching Effectiveness for the Competency Area of Classroom and Laboratory Instruction When Compared with the Sex and Membership in the FFA of the Respondent

Classroom and Laboratory Instruction Competencies	SEX			MEMBERSHIP			INTERACTION
	Female Mean**	Male Mean**	F Probability	No Mean**	Yes Mean**	F Probability	F Probability
9. Maintain School agricultural education laboratories	3.62	3.80	0.070	3.74	3.66	0.372	0.513
10. Provide for safety needs of students	3.69	3.86	0.039*	3.83	3.69	0.077	0.370
11. Provide guidance to students	3.96	4.02	0.398	4.02	3.94	0.312	0.469

*Significant at the .05 level of probability

**Based on a five-point rating scale of 1 = unsatisfactory, 2 = below average, 3 = average, 4 = above average, and 5 = superior.

which were significant at the .05 level can be found in Appendix F, Tables D-3 through D-5.

For the competency area of FFA, when the teaching effectiveness was compared with enrollment in FFA, all eight competencies except one, supervising students in developing a program of activities, were found to be significant at the .05 level. All eight competencies were rated higher by those respondents who had been FFA members than those who had not. None of the competencies were significant when compared with the sex of the respondents or with the two-way interaction; however, male respondents rated themselves higher than female respondents on all competencies in this competency area except that of assisting students in participating in competitive activities. Table 38 reports these findings. Analysis of Variance Summary Tables for the significant competencies and the overall mean for the competency area, FFA can be found in Appendix F, Tables D-6 through D-12.

In the competency area of supervised occupational experience programs, none of the competencies when compared with the sex of the respondents, enrollment in FFA, or the two-way interaction were significant at the .05 level. However, males rated themselves higher than female respondents and tied with them on all six competencies, and those who were enrolled in the FFA also rated themselves higher than those who were not FFA members. Table 39 reports these findings.

For the competency area of adult education, none of the competencies were significant at the .05 level when compared with the sex of the respondent, FFA enrollment, or with the two-way interaction. Male respondents, again rated themselves higher than female respondents on all four competencies. Only one of the four competencies was rated

Table 38. Means and F Probabilities for the Self-Perceived Teaching Effectiveness for the Competency Area of FFA When Compared with the Sex and Membership in the FFA of the Respondents

FFA Competencies	SEX			MEMBERSHIP			INTERACTION
	Female Mean**	Male Mean**	F Probability	No Mean **	Yes Mean **	F Probability	F Probability
1. Orient students to the FFA	3.60	3.67	0.654	3.45	3.92	0.000*	0.762
2. Supervise students in developing a program of activities	3.36	3.54	0.135	3.37	3.57	0.131	0.879
3. Prepare students for leadership roles in the FFA	3.42	3.61	0.152	3.36	3.76	0.001*	0.829
4. Assist students in conducting FFA meetings	3.60	3.73	0.336	3.55	3.85	0.007*	0.714
5. Supervise students in advancing in FFA membership	3.41	3.57	0.201	3.32	3.74	0.001*	0.870
6. Assist students in participating in competitive activities	3.77	3.72	0.774	3.60	3.95	0.007*	0.763

(Continued on next page)

Table 38. Means and F Probabilities for the Self-Perceived Teaching Effectiveness for the Competency Area of FFA When Compared with the Sex and Membership in the FFA of the Respondents (Continued)

FFA Competencies	SEX			MEMBERSHIP			INTERACTION
	Female Mean**	Male Mean**	F Probability	No Mean**	Yes Mean**	F Probability	F Probability
7. Assist students in the conduct of FFA fund raising activities	3.68	3.78	0.395	3.60	3.93	0.009*	0.909
8. Supervise students in the conduct of banquets	3.66	3.74	0.503	3.54	3.94	0.006*	0.725

*Significant at the .05 level of probability

**Based on a five-point rating scale of 1 = unsatisfactory, 2 = below average, 3 = average, 4 = above average, and 5 = superior.

Table 39. Means and F Probabilities for the Self-Perceived Teaching Effectiveness for the Competency Area of Supervised Occupational Experience Programs When Compared with the Sex and Membership in the FFA of the Respondents

Supervised Occupational Experience Program Competencies	SEX			MEMBERSHIP			INTERACTION
	Female Mean**	Male Mean**	F Probability	No Mean**	Yes Mean**	F Probability	F Probability
1. Establish supervised occupational experience programs	3.50	3.50	0.744	3.45	3.58	0.441	0.407
2. Obtain training stations	3.17	3.30	0.199	3.22	3.27	0.935	0.346
3. Place students in training programs	3.18	3.28	0.408	3.16	3.33	0.338	0.684
4. Develop training plans	3.05	3.18	0.223	3.07	3.20	0.564	0.448
5. Supervise training stations	3.16	3.16	0.913	3.13	3.21	0.642	0.711
6. Assist students in recordkeeping	3.45	3.53	0.453	3.41	3.61	0.143	0.684

*Significant at the .05 level of probability

**Based on a five-point rating scale of 1 = unsatisfactory, 2 = below average, 3 = average, 4 = above average, and 5 = superior.

higher by those who had not been FFA members, that of organizing an adult education program. Table 40 presents these findings.

None of the competencies were found to be significant at the .05 level for the competency area, public relations, advisory committees, and professionalism, when compared to the sex of the respondents, FFA enrollment, or the two-way interaction. However, female respondents and respondents who had been enrolled in the FFA rated themselves higher on all four competencies than male respondents and respondents who were not FFA members. Table 41 reports these findings.

Summary of the Data Presentation

The data presented represent the responses of 433, or 66.6 percent of the 650 female and male vocational agriculture/agribusiness teachers originally surveyed. Of those surveyed, 216, or 66.5 percent of the females, responded and 217, or 66.8 percent of the males, responded. The overall self-perceived teaching effectiveness was found to be average by both females and males in all six competency areas.

In analyzing the self-perceived teaching effectiveness on the basis of the sex of the respondents, males rated themselves significantly higher than did females on eleven of the twelve competencies. These differences were found to be significant at the .05 level of probability. These eleven competencies included one in the competency area of program planning, one in the competency area of classroom and laboratory instruction, seven in the competency area of FFA, and two in the competency area of adult education. The compe-

Table 40. Means and F Probabilities for the Self-Perceived Teaching Effectiveness for the Competency Area of Adult Education When Compared with the Sex and Membership in the FFA of the Respondents

Adult Education Competencies	SEX			MEMBERSHIP			INTERACTION
	Female Mean**	Male Mean**	F Probability	No Mean**	Yes Mean**	F Probability	F Probability
1. Assess needs of adults in the community	2.96	3.29	0.220	3.12	3.21	0.386	0.480
2. Organize an adult education program	3.03	3.37	0.063	3.24	3.22	0.590	0.443
3. Use resource persons in the adult education program	3.22	3.34	0.432	3.26	3.33	0.966	0.700
4. Use teaching strategies appropriate for adults	3.21	3.37	0.461	3.27	3.35	0.714	0.961

*Significant at the .05 level of probability

**Based on a five-point rating scale of 1 = unsatisfactory, 2 = below average, 3 = average, 4 = above average, and 5 = superior.

Table 41. Means and F Probabilities for the Self-Perceived Teaching Effectiveness for the Competency Area of Public Relations, Advisory Committees, and Professionalism When Compared with the Sex and Membership in the FFA of the Respondents

Public Relations, Advisory Committees, and Professionalism Comp.	SEX			MEMBERSHIP			INTERACTION
	Female Mean**	Male Mean**	F Probability	No Mean**	Yes Mean**	F Probability	F Probability
1. Establish good public relations with community members	3.94	3.91	0.904	3.87	4.00	0.335	0.311
2. Keep the community up to date through publicity	3.55	3.53	0.923	3.45	3.69	0.061	0.547
3. Use an advisory committee	3.34	3.30	0.595	3.26	3.42	0.709	0.056
4. Attend professional meetings	4.10	3.92	0.234	3.93	4.15	0.094	0.389

*Significant at the .05 level of probability

**Based on a five-point rating scale of 1 = unsatisfactory, 2 = below average, 3 = average, 4 = above average, and 5 = superior.

tency in which females rated themselves higher was in the competency area of classroom and laboratory instruction, that of preparing daily lesson plans.

In comparing the self-perceived teaching effectiveness with the educational level of the respondent, six competencies were found to be significant at the .05 level. For all six significant competencies, those respondents with masters degrees rated themselves higher than those respondents with baccalaureate degrees. Two of these competencies were in the program planning competency area and the remaining four were in the competency area of classroom and laboratory instruction.

When the self-perceived teaching effectiveness was compared with the respondents enrollment in vocational agriculture/agribusiness when in high school, eight competencies were determined to be significant at the .05 level. One competency in the classroom and laboratory instruction competency area was rated higher by those respondents who had not been enrolled in vocational agriculture/agribusiness when in high school. The remaining seven significant competencies were rated higher by those respondents who had been enrolled in vocational agriculture/agribusiness when in high school. Six were in the competency area of FFA and one was in the competency area of supervised occupational experience programs.

Seven competencies, all of which were in the competency area of FFA, were found to be significant at the .05 level when the self-perceived teaching effectiveness was compared to the respondents' membership in the FFA. All seven competencies in the competency area of FFA were rated higher by those respondents who had been FFA members than by those who had not.

CHAPTER V

SUMMARY OF FINDINGS, CONCLUSIONS, AND RECOMMENDATIONS

The purpose of this study was to determine and compare the self-perceived teaching effectiveness on selected competencies of female and male vocational agriculture/agribusiness teachers in secondary schools in states where females are employed.

Data were collected from 433, or 66.6 percent of the sample of female and male vocational agriculture/agribusiness teachers. Of the population surveyed, 216, or 66.5 percent, of the females responded and 217, or 66.8 percent, of the males responded. The mailed instrument used to determine the necessary information was comprised of two parts: part one gathered biographical and professional information on the teachers and part two assessed the self-perceived teaching effectiveness of the respondents as teachers of vocational agriculture/agribusiness. The data were punched into cards for analysis at the Thomas E. Tramel Computing Center at Mississippi State University, Mississippi State, Mississippi. Statistical procedures included the tabulation of frequencies, calculation of measures of central tendencies, and application of one-way and two-way analyses of variance.

Summary of Findings

The findings of this study are reported in two sections: (1) Characteristics of the Respondents, and (2) Self-Perceived Teaching Effectiveness of the Respondents.

Characteristics of the Respondents

1. Approximately 2.6 percent (325) of the 11,222 persons teaching vocational agriculture/agribusiness in the United States are female.
2. The Eastern region of the United States has the highest percentage (4.6 percent, or 134) of female vocational agriculture/agribusiness teachers, and the Central region of the United States has the smallest percentage (1.7 percent, or 58) of female vocational agriculture/agribusiness teachers.
3. The largest percentage of female respondents (157, or 73.0 percent) and male respondents (112, or 52.3 percent) had baccalaureate degrees. Twice as many male respondents (73, or 34.1 percent) as female respondents (39, or 18.1 percent) had masters degrees.
4. Only 30, or 14.0 percent, of the female respondents and 129, or 59.4 percent, of the male respondents were enrolled in vocational agriculture/agribusiness when in high school.
5. Thirty (14.0 percent) of the female respondents and 129 (59.3 percent) of the male respondents were members of the FFA when in high school.
6. The largest percentage of female respondents (65, or 31.7 percent) had received their baccalaureate degreee in horticulture. The largest percentage of male respondents (100, or 48.1 percent) had received their baccalaureate degree in agricultural education.

7. One hundred and seventy-four, or 81.3 percent, of the female respondents had taught between one and three years, while males were more evenly distributed between one and forty-one years.
8. The largest percentage of female respondents taught horticulture in grade 11 (116, or 53.7 percent) and grade 12 (113, or 52.3 percent). The largest percentage of male respondents taught basic vocational agriculture/agribusiness in grade 9 (98, or 55.2 percent) and production agriculture in grade 11 (97, or 44.7 percent).
9. The area of agriculture that the largest number of respondents (93) were teaching was horticulture. This included both male and female respondents.
10. Seventy-three, or 34.0 percent, of the female respondents were in single teacher departments as opposed to 86, or 39.6 percent of the male respondents.
11. Seventy-three, or 34.3 percent, of the female respondents were department heads (chairpersons) and 122, or 56.5 percent of the male respondents were department heads (chairpersons).

Self-Perceived Teaching Effectiveness of the Respondents

1. Males rated themselves higher on eleven of the twelve competencies that were found to be significant at the .05 level when compared with the sex of the respondent.

2. Males rated themselves significantly higher (.05 level) on one competency, that of preparing departmental budgets, in the competency area of program planning.
3. Females rated themselves significantly higher (.05 level) on one competency, preparing daily lesson plans, in the competency area of classroom and laboratory instruction. Males rated themselves significantly higher (.05 level) in this competency area on the competency, maintaining student discipline.
4. Males rated themselves significantly (0.5 level) higher on seven of the eight competencies in the competency area of FFA. These competencies were orienting students to the FFA, supervising students in developing a program of activities, preparing students for leadership roles in the FFA, assisting students in conducting FFA meetings, supervising students in advancing in FFA membership, assisting students in the conduct of FFA fund raising activities, and supervising students in the conduct of banquets.
5. There were no competencies in the competency area of supervised occupational experience programs that were found to be significant at the .05 level of probability when compared with the sex of the respondents.
6. Two of the four competencies were rated significantly higher (.05 level) by males in the competency area of adult education. The competencies included assessing the needs of the adults in the community and organizing an adult education program.

7. There were no competencies in the competency area of public relations, advisory committees, and professionalism that were found to be significant at the .05 level of probability when compared with the sex of the respondents.
8. Respondents with masters degrees rated themselves significantly higher (.05 level) than respondents with baccalaureate degrees on two competencies in the competency area of program planning. These competencies were preparing departmental budgets and completing required report forms.
9. Four of the eleven competencies in the competency area of classroom and laboratory instruction were rated significantly higher (.05 level) by respondents with masters degrees than respondents with baccalaureate degrees. The competencies included obtaining instructional materials, maintaining student discipline, maintaining a filing system, and providing guidance to students.
10. No competencies in the competency areas of FFA, supervised occupational experience programs, adult education, or public relations, advisory committees, and professionalism were found to be significant at the .05 level of probability when compared with the educational level of the respondents.
11. Three competencies produced a significant interaction (.05 level) between the sex of the respondent and the educational level of the respondent. One competency was in the competency area of program planning, that of completing required report forms. (Males with masters degrees tended to rate

themselves higher than males with baccalaureate degrees.) Another competency was in the competency area of classroom and laboratory instruction, that of maintaining student discipline. (Females with masters degrees tended to rate themselves higher than females with baccalaureate degrees.) The third competency was in the competency area of FFA, that of supervising students in the conduct of banquets. (Males with masters degrees tended to rate themselves higher than males with baccalaureate degrees, while females with baccalaureate degrees tended to rate themselves higer than females with masters degrees.)

12. Respondents who were not enrolled in vocational agriculture/agribusiness when in high school rated themselves significantly higher (.05 level) than respondents who were enrolled in vocational agriculture/agribusiness in high school on one competency, that of providing for safety needs of students, in the competency area of classroom and laboratory instruction.
13. Six of the eight competencies in the competency area of FFA were rated significantly higher (.05 level) by respondents who had been enrolled in vocational agriculture/agribusiness when in high school than those who had not. These competencies were orienting students to the FFA, preparing students for leadership roles in the FFA, assisting students in conducting FFA meetings, supervising students in advancing in FFA membership, assisting students in participating in com-

petitive activities, and supervising students in the conduct of banquets.

14. One of the six competencies in the competency area of supervised occupational experience programs, that of assisting students in recordkeeping, when compared with the enrollment in vocational agriculture/agribusiness was rated significantly higher (.05 level) by those respondents who were enrolled in vocational agriculture/agribusiness when in high school, than by those respondents who were not.
15. No competencies in the competency areas of program planning, adult education and public relations, advisory committees, and professionalism were found to be significant at the .05 level of probability when the self-perceived teaching effectiveness was compared with the respondents enrolled in vocational agriculture/agribusiness when in high school.
16. There were no competencies that produced a significant (.05 level) interaction between the sex of the respondent and the enrollment of the respondent in vocational agriculture/agribusiness when in high school.
17. Seven of the eight competencies in the competency area of FFA were rated significantly higher (.05 level) by those respondents who had been FFA members. These competencies included orienting students to the FFA, preparing students for leadership roles in the FFA, assisting students in conducting FFA meetings, supervising students in advancing in FFA membership, assisting students in participating in com-

petitive activities, assisting students in the conduct of FFA fund-raising activities, and supervising students in the conduct of banquets.

18. No competencies in the competency area of program planning, classroom and laboratory instruction, supervised occupational experience programs, adult education, or public relations, advisory committees, and professionalism were found to be significant at the .05 level when the self-perceived teaching effectiveness was compared with the respondents membership in the FFA.

19. Two competencies produced a significant (.05 level) interaction between the sex of the respondents and the membership in the FFA. One competency was in the competency area of program planning, that of determining student needs, and the second competency was in the competency area of classroom and laboratory instruction, that of evaluating student performance. With both competencies, the interaction could be accounted for in that the mean for males enrolled in FFA was greater (though not statistically significant) than those not enrolled, while the mean for females enrolled in FFA was lower (though not statistically significant) than those not enrolled.

Conclusions

From this study it was concluded that:

1. Female teachers of vocational agriculture/agribusiness do perceive themselves to be effective as teachers of vocational agriculture/agribusiness.
2. The self-perceptions of the effectiveness of female and male teachers of vocational agriculture/agribusiness are not significantly different for a majority of the competencies commonly performed by teachers of vocational agriculture/agribusiness.
3. Over half of the commonly performed competencies in which females rated themselves lower related to the FFA.
4. In states where females are employed as teachers of vocational agriculture/agribusiness, they are generally teaching horticulture, whereas male vocational agriculture/agribusiness teachers are generally teaching basic vocational agriculture and production agriculture.
5. Past enrollment in vocational agriculture/agribusiness and FFA does help in performing many competencies in the area of FFA.

Recommendations

The following recommendations are made on the basis of the findings of this study.

1. Females should continue to be encouraged to teach vocational agriculture/agribusiness.

2. Females should continue to be encouraged to enroll in vocational agriculture/agribusiness and the FFA, while in high school.
3. Vocational agriculture/agribusiness teachers (both female and male) who were not enrolled in vocational agriculture/agribusiness in high school or who were not in the FFA should be provided with additional instruction in the area of FFA.
4. Both female and male vocational agriculture/agribusiness teachers who lack experiences in the area of FFA should be placed in multi-teacher departments with other teachers who have a strong FFA background.
5. More females should be encouraged to obtain the preparation needed to teach in areas other than horticulture.
6. Further studies should be conducted to determine the effectiveness of females and males as vocational agriculture/agribusiness teachers.
7. Further studies should be conducted on the self-perceived teaching effectiveness of male and female vocational agriculture/agribusiness teachers.

APPENDIX A

Letter Sent to State Supervisors of Vocational Agriculture/Agribusiness

MISSISSIPPI STATE UNIVERSITY

DEPARTMENT OF AGRICULTURAL
AND EXTENSION EDUCATION
P. O. DRAWER AV
MISSISSIPPI STATE, MISSISSIPPI 39762

January 24, 1978

Dear

The Department of Agricultural and Extension Education at Mississippi State University is currently conducting a national study of the effectiveness of female vocational agriculture/agribusiness teachers. Part of this study will be used in a masters degree thesis. In order to proceed with the study a teacher roster is needed with the names and complete mailing addresses of all vocational agriculture teachers in your state. Please identify the female teachers by placing a mark beside their names. Without this information from your state the study cannot be fully accomplished. We need to receive the teacher list by February 8, 1978. If you have no female teachers, please respond anyway.

Your cooperation will be appreciated.

Sincerely,

Susan F. Moore

Susan F. Moore
Graduate Assistant

Jasper S. Lee

Jasper S. Lee
Associate Professor

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APPENDIX B

Follow-Up Letter Sent to State Supervisors of Vocational Agriculture/Agribusiness

MISSISSIPPI STATE UNIVERSITY

DEPARTMENT OF AGRICULTURAL
AND EXTENSION EDUCATION
P. O. DRAWER AV
MISSISSIPPI STATE, MISSISSIPPI 39762

Recently you were mailed a request for a copy of your state vocational agriculture teacher roster with the names of the female teachers identified in some way. This information is needed to accomplish a study currently being conducted by the Department of Agricultural and Extension Education at Mississippi State University on the effectiveness of female vocational agriculture/agribusiness teachers. If you have sent the teacher roster, we thank you (and please discard this letter). If not, we would appreciate your taking a few minutes to send your list. Without this information, the study cannot be fully accomplished.

Your help will be appreciated.

Sincerely,

Susan F. Moore

Susan F. Moore
Graduate Assistant

Jasper S. Lee

Jasper S. Lee
Associate Professor

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APPENDIX C

Cover Letter to Accompany Instrument

MISSISSIPPI STATE UNIVERSITY

DEPARTMENT OF AGRICULTURAL
AND EXTENSION EDUCATION
P. O. DRAWER AV
MISSISSIPPI STATE, MISSISSIPPI 39762

April 19, 1978

Dear Vocational Agriculture Instructor:

The Department of Agricultural and Extension Education at Mississippi State University is conducting a national study of the activities performed by vocational agriculture/agribusiness teachers. Part of this study will be used for a Master's degree thesis. You can be assured, however, that your responses will be kept confidential.

Please complete and return the enclosed questionnaire by May 3, 1978. It will take only a few moments of your time and a stamped return envelope is enclosed.

Your cooperation will be appreciated.

Sincerely,

Susan F. Moore
Susan F. Moore
Graduate Assistant

Jasper S. Lee
Jasper S. Lee
Associate Professor

Enclosure

APPENDIX D

Instrument Sent to Sample Vocational Agriculture/Agribusiness Teachers

For Office Use Only

SURVEY OF ACTIVITIES PERFORMED BY
VOCATIONAL AGRICULTURE/AGRIBUSINESS TEACHERS

Instructions

Please indicate your responses to the following questions. Your helpfulness in providing accurate information will be valuable to this study.

1. What is the highest level of education you have achieved? (check one)

(1) _____ High school diploma
(2) _____ Associate degree (junior or community college)
(3) _____ Baccalaureate degree
(4) _____ Masters degree
(5) _____ Educational specialist degree (or equivalent of 30 semester hours past the Masters degree)
(6) _____ Doctoral degree

2. (a) Were you enrolled in vocational agriculture/agribusiness in high school?
(1) _____ No
(2) _____ Yes; _______ years

(b) Were you a member of the FFA?
(1) _____ No
(2) _____ Yes; _______ years

3. If you have a Baccalaureate degree, what was your primary major? (check one)

(1) _____ Agricultural Economics
(2) _____ Agricultural Education
(3) _____ Agricultural Engineering
(4) _____ Agronomy
(5) _____ Animal Science
(6) _____ Biology
(7) _____ Dairy Science
(8) _____ Forestry
(9) _____ General Agriculture
(10) _____ Horticulture
(11) _____ Poultry Science
(12) _____ Wildlife
(13) _____ Other (please specify) _______
____

4. How many years have you taught vocational agriculture/agribusiness? ___________

5. What area(s) of vocational agriculture/agribusiness are you teaching? Place a circle around the grade(s) in the area(s) you are presently teaching.

Areas of Vocational Agriculture/Agribusiness	Grade(s)
(1) Basic Vocational Agriculture	7 8 9 10 11 12 Adult
(2) Production Agriculture	7 8 9 10 11 12 Adult
(3) Horticulture	7 8 9 10 11 12 Adult
(4) Agricultural Mechanics	7 8 9 10 11 12 Adult
(5) Forestry	7 8 9 10 11 12 Adult
(6) Renewable Natural Resources	7 8 9 10 11 12 Adult
(7) Agricultural Supplies and Services	7 8 9 10 11 12 Adult
(8) Agricultural Products, Processing and Marketing	7 8 9 10 11 12 Adult
(9) Other (please specify) ______________	7 8 9 10 11 12 Adult
______________________	7 8 9 10 11 12 Adult
______________________	7 8 9 10 11 12 Adult

6. (a) How many teachers (including yourself) are there in your vocational agriculture/agribusiness department? ________________

(b) Are you the department head (chairperson)? (1) _____ Yes (2) _____ No

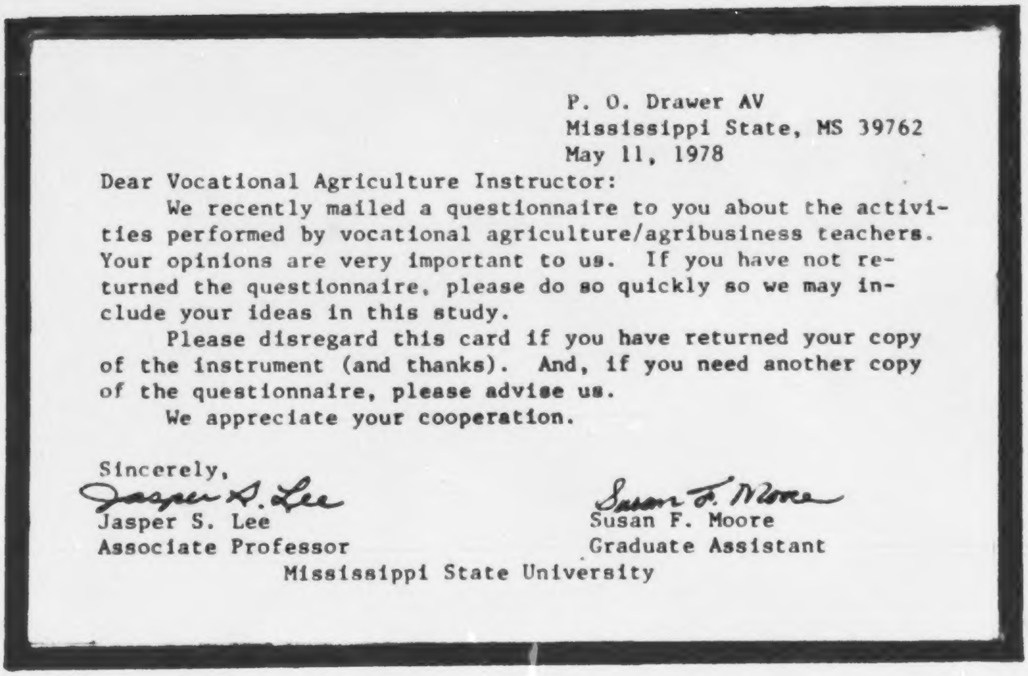
7. Please rate how well you feel you are performing the activities listed below using the following rating scale.

1 = Unsatisfactory--can not perform the activity
2 = Below average--activity is performed, but poorly
3 = Average--activity is performed in an acceptable manner
4 = Above average--activity is performed better than most
5 = Superior--activity is performed at the utmost level
6 = Does not apply--activity is not required in the program

Indicate your rating by circling the appropriate number.	Unsatisfactory	Below Average	Average	Above average	Superior	Does not apply
A. Program Planning						
1. Develop written program plans	1	2	3	4	5	6
2. Determine student needs	1	2	3	4	5	6
3. Prepare departmental budgets	1	2	3	4	5	6
4. Complete required report forms.	1	2	3	4	5	6
5. Maintain a summer program of work	1	2	3	4	5	6
6. Evaluate the vocational agriculture/agribusiness program	1	2	3	4	5	6
B. Classroom and Laboratory Instruction						
1. Prepare daily lesson plans.	1	2	3	4	5	6
2. Use a variety of teaching techniques, such as lectures, field trips, resource persons, group discussions, etc.	1	2	3	4	5	6
3. Use a variety of audiovisual aids, such as slide projectors, filmstrip projectors, 16mm film projectors, overhead projectors, etc.	1	2	3	4	5	6
4. Obtain instructional materials	1	2	3	4	5	6
5. Evaluate student performance	1	2	3	4	5	6
6. Maintain student discipline	1	2	3	4	5	6
7. Maintain an inventory of departmental equipment	1	2	3	4	5	6
8. Maintain a filing system	1	2	3	4	5	6
9. Maintain school agricultural education laboratories	1	2	3	4	5	6
10. Provide for safety needs of students	1	2	3	4	5	6
11. Provide guidance to students	1	2	3	4	5	6
C. FFA						
1. Orient students to the FFA.	1	2	3	4	5	6
2. Supervise students in developing a program of activities	1	2	3	4	5	6
3. Prepare students for leadership roles in the FFA	1	2	3	4	5	6
4. Assist students in conducting FFA meetings.	1	2	3	4	5	6
5. Supervise students in advancing in FFA membership	1	2	3	4	5	6
6. Assist students in participating in competitive activities.	1	2	3	4	5	6
7. Assist students in the conduct of FFA fund raising activities	1	2	3	4	5	6
8. Supervise students in the conduct of banquets	1	2	3	4	5	6
D. Supervised Occupational Experience Programs						
1. Establish supervised occupational experience programs	1	2	3	4	5	6
2. Obtain training stations	1	2	3	4	5	6
3. Place students in training programs	1	2	3	4	5	6
4. Develop training plans.	1	2	3	4	5	6
5. Supervise training stations	1	2	3	4	5	6
6. Assist students in recordkeeping	1	2	3	4	5	6
E. Adult Education						
1. Assess needs of adults in the community	1	2	3	4	5	6
2. Organize an adult education program	1	2	3	4	5	6
3. Use resource persons in the adult education program	1	2	3	4	5	6
4. Use teaching strategies appropriate for adults.	1	2	3	4	5	6
F. Public Relations, Advisory Committees, and Professionalism						
1. Establish good public relations with community members.	1	2	3	4	5	6
2. Keep the community up to date through publicity	1	2	3	4	5	6
3. Use an advisory committee	1	2	3	4	5	6
4. Attend professional meetings	1	2	3	4	5	6

APPENDIX E

Reminder Post Card Sent to Sample Vocational Agriculture/Agribusiness Teachers



P. O. Drawer AV
Mississippi State, MS 39762
May 11, 1978

Dear Vocational Agriculture Instructor:

We recently mailed a questionnaire to you about the activities performed by vocational agriculture/agribusiness teachers. Your opinions are very important to us. If you have not returned the questionnaire, please do so quickly so we may include your ideas in this study.

Please disregard this card if you have returned your copy of the instrument (and thanks). And, if you need another copy of the questionnaire, please advise us.

We appreciate your cooperation.

Sincerely,

Jasper S. Lee
Jasper S. Lee
Associate Professor

Susan F. Moore
Susan F. Moore
Graduate Assistant

Mississippi State University

APPENDIX F

Analysis of Variance Summary Tables

Table A-1. Analysis of Variance Summary Table for the Competency Prepare Departmental Budgets by Sex of the Respondents

ANOVA SUMMARY

SOURCE	df	SS	MS	F RATIO
Between	1	16.10	16.10	18.36*
Within	363	318.43	0.88	
Total	364	334.53		

* P < .05, F = 3.84 or higher

Table A-2. Analysis of Variance Summary Table for the Competency Prepare Daily Lesson Plans by Sex of the Respondents

ANOVA SUMMARY

SOURCE	DF	SS	MS	F RATIO
Between	1	3.32	3.32	4.34*
Within	421	321.93	0.76	
Total	422	325.25		

* P < .05, F = 3.84 or higher

Table A-3. Analysis of Variance Summary Table for the Competency Maintain Student Discipline by Sex of the Respondents

ANOVA SUMMARY				
SOURCE	df	SS	MS	F RATIO
Between	1	8.53	8.53	13.48*
Within	426	269.38	0.63	
Total	427	277.91		

* P < .05, F = 3.84 or higher

Table A-4. Analysis of Variance Summary Table for the Competency Orient Students to the FFA by Sex of the Respondents

ANOVA SUMMARY				
SOURCE	DF	SS	MS	F RATIO
Between	1	7.58	7.58	7.06*
Within	374	401.50	1.07	
Total	375	409.08		

* P < .05, F = 3.84 or higher

Table A-5. Analysis of Variance Summary Table for the Competency Supervise Students in Developing a Program of Activities by Sex of the Respondents

ANOVA SUMMARY

SOURCE	df	SS	MS	F RATIO
Between	1	6.96	6.96	6.94*
Within	372	373.12	1.00	
Total	373	380.09		

* P < .05, F = 3.84 or higher

Table A-6. Analysis of Variance Summary Table for the Competency Prepare Students for Leadership Roles in the FFA by Sex of the Respondents

ANOVA SUMMARY

SOURCE	DF	SS	MS	F RATIO
Between	1	12.76	12.76	13.11*
Within	370	360.20	0.97	
Total	371	372.96		

* P < .05, F = 3.84 or higher

Table A-7. Analysis of Variance Summary Table for the Competency Assist Students in Conducting FFA Meetings by Sex of the Respondents

ANOVA SUMMARY

SOURCE	df	SS	MS	F RATIO
Between	1	6.12	6.12	0.99*
Within	367	321.17	0.88	
Total	368	327.29		

* P < .05, F = 3.84 or higher

Table A-8. Analysis of Variance Summary Table for the Competency Supervise Students in Advancing in FFA Membership by Sex of the Respondents

ANOVA SUMMARY

SOURCE	DF	SS	MS	F RATIO
Between	1	10.78	10.78	11.71*
Within	363	334.41	0.92	
Total	364	345.19		

* P < .05, F = 3.84 or higher

Table A-9. Analysis of Variance Summary Table for the Competency Assist Students in the Conduct of FFA Fund-Raising Activities by Sex of the Respondents

ANOVA SUMMARY

SOURCE	df	SS	MS	F RATIO
Between	1	6.33	6.33	6.45*
Within	361	354.12	0.98	
Total	362	360.45		

* $P < .05$, $F = 3.84$ or higher

Table A-10. Analysis of Variance Summary Table for the Competency Supervise Students in the Conduct of Banquets by Sex of the Respondents

ANOVA SUMMARY

SOURCE	DF	SS	MS	F RATIO
Between	1	6.43	6.43	5.44*
Within	343	405.42	1.18	
Total	344	411.84		

* $P < .05$, $F = 3.84$ or higher

Table A-11. Analysis of Variance Summary Table for the Competency Assess Needs of the Adults in the Community by Sex of the Respondents

ANOVA SUMMARY

SOURCE	df	SS	MS	F RATIO
Between	1	8.62	8,62	8,46*
Within	241	245.44	1.02	
Total	242	254,06		

* $P < .05$, $F = 3.84$ or higher

Table A-12. Analysis of Variance Summary Table for the Competency Organize an Adult Education Program by Sex of the Respondents

ANOVA SUMMARY

SOURCE	DF	SS	MS	F RATIO
Between	1	5,41	5,41	4.10*
Within	212	279.83	1.32	
Total	213	285.23		

* $P < .05$, $F = 3.84$ or higher

Table B-1. Analysis of Variance Summary Table for the Competency Prepare Departmental Budgets by Sex and Educational Level of the Respondents

Source of Variation	Degrees of Freedom	Sum of Squares	Mean Square	F Ratio
A (Sex)	1	5.26	5.26	5.99*
B (Educational Level)	1	9.99	9.99	11.37*
A x B (interaction)	1	1.80	1.80	2.05
Within	317	278.42	0.88	

*P < .05, F = 3.84 or higher, df = 1

Table B-2. Analysis of Variance Summary Table for the Competency Complete Required Report Forms by Sex and Educational Level of the Respondents

Source of Variation	Degrees of Freedom	Sum of Squares	Mean Square	F Ratio
A (Sex)	1	0.85	0.85	1.02
B (Educational Level)	1	5.34	5.34	6.43*
A x B (interaction)	1	4.23	4.23	5.09*
Within	361	299.97	0.83	

*P < .05, F = 3.84 or higher, df = 1

Table B-3. Analysis of Variance Summary Table for the Competency Prepare Daily Lesson Plans by Sex and Educational Level of the Respondents

Source of Variation	Degrees of Freedom	Sum of Squares	Mean Square	F Ratio
A (Sex)	1	4.89	4.89	6.41*
B (Educational Level)	1	1.68	1.68	2.20
A x B (interaction)	1	0.00	0.00	0.00
Within	369	281.40	0.76	

*P < .05, F = 3.84 or higher, df = 1

Table B-4. Analysis of Variance Summary Table for the Competency Obtain Instructional Materials by Sex and Educational Level of the Respondents

Source of Variation	Degrees of Freedom	Sum of Squares	Mean Square	F Ratio
A (Sex)	1	1.16	1.16	1.98
B (Educational Level)	1	4.17	4.17	7.12*
A x B (interaction)	1	1.28	1.28	2.18
Within	377	220.78	0.59	

*P < .05, F = 3.84 or higher, df = 1

Table B-5. Analysis of Variance Summary Table for the Competency Maintain Student Discipline by Sex and Educational Level of the Respondents

Source of Variation	Degrees of Freedom	Sum of Squares	Mean Square	F Ratio
A (Sex)	1	0.82	0.82	1.35
B (Educational Level)	1	4.19	4.19	6.88
A x B (interaction)	1	2.56	2.56	4.21*
Within	373	227.01	0.61	

*P < .05, F = 3.84 or higher, df = 1

Table B-6. Analysis of Variance Summary Table for the Competency Maintain a Filing System by Sex and Educational Level of the Respondents

Source of Variation	Degrees of Freedom	Sum of Squares	Mean Square	F Ratio
A (Sex)	1	1.45	1.45	1.78
B (Educational Level)	1	5.47	5.47	6.73*
A x B (interaction)	1	0.15	0.15	0.19
Within	371	301.55	0.81	

*P < .05, F = 3.84 or higher, df = 1

Table B-7. Analysis of Variance Summary Table for the Competency Provide Guidance to Students by Sex and Educational Level of the Respondents

Source of Variation	Degrees of Freedom	Sum of Squares	Mean Square	F Ratio
A (Sex)	1	1.29	1.29	2.06
B (Educational Level)	1	3.57	3.57	5.69*
A x B (interaction)	1	2.27	2.27	3.61
Within	372	233.17	0.63	

*P < .05, F = 3.84 or higher, df = 1

Table B-8. Analysis of Variance Summary Table for the Competency Orient Students to the FFA by Sex and Educational Level of the Respondents

Source of Variation	Degrees of Freedom	Sum of Squares	Mean Square	F Ratio
A (Sex)	1	5.97	5.97	5.73*
B (Educational Level)	1	0.43	0.43	0.41
A x B (interaction)	1	0.19	0.19	0.19
Within	329	343.04	1.04	

*P < .05, F = 3.84 or higher, df = 1

Table B-9. Analysis of Variance Summary Table for the Competency Prepare Students for Leadership Roles in the FFA by Sex and Educational Level of the Respondents

Source of Variation	Degrees of Freedom	Sum of Squares	Mean Square	F Ratio
A (Sex)	1	5.02	5.02	5.07*
B (Educational Level)	1	3.12	3.12	3.15
A x B (interaction)	1	0.11	0.11	0.12
Within	327	323.49	0.99	

*P < .05, F = 3.84 or higher, df = 1

Table B-10. Analysis of Variance Summary Table for the Competency Supervise Students in Advancing in FFA Membership by Sex and Educational Level of the Respondents

Source of Variation	Degrees of Freedom	Sum of Squares	Mean Square	F Ratio
A (Sex)	1	4.27	4.27	4.68*
B (Educational Level)	1	0.02	0.02	0.02
A x B (interaction)	1	0.38	0.38	0.42
Within	323	294.14	0.91	

*P < .05, F = 3.84 or higher, df = 1

Table B-11. Analysis of Variance Summary Table for the Competency Supervise Students in the Conduct of Banquets by Sex and Educational Level of the Respondents

Source of Variation	Degrees of Freedom	Sum of Squares	Mean Square	F Ratio
A (Sex)	1	6.87	6.87	6.00*
B (Educational Level)	1	0.01	0.01	0.01
A x B (interaction)	1	6.81	6.81	5.94*
Within	305	349.37	1.15	

*P < .05, F = 3.84 or higher, df = 1

Table B-12. Analysis of Variance Summary Table for the Competency Assess Needs of Adults in the Community by Sex and Educational Level of the Respondents

Source of Variation	Degrees of Freedom	Sum of Squares	Mean Square	F Ratio
A (Sex)	1	6.21	6.21	6.11*
B (Educational Level)	1	0.36	0.36	0.36
A x B (interaction)	1	0.48	0.48	0.47
Within	208	211.32	1.02	

*P < .05, F = 3.84 or higher, df = 1

Table C-1. Analysis of Variance Summary Table for the Competency Prepare Departmental Budgets by Sex and Enrollment in Vocational Agriculture/Agribusiness of the Respondents

Source of Variation	Degrees of Freedom	Sum of Squares	Mean Square	F Ratio
A (Sex)	1	11.86	11.86	13.52*
B (Enrollment in Vocational Agriculture/Agribusiness)	1	0.16	0.16	0.19
A x B (interaction)	1	0.65	0.65	0.74
Within	360	315.90	0.88	

*P < .05, F = 3.84 or higher, df = 1

Table C-2. Analysis of Variance Summary Table for the Competency Maintain Student Discipline by Sex and Enrollment in Vocational Agriculture/Agribusiness of the Respondents

Source of Variation	Degrees of Freedom	Sum of Squares	Mean Square	F Ratio
A (Sex)	1	8.78	8.78	13.88*
B (Enrollment in Vocational Agriculture/Agribusiness)	1	1.41	1.41	2.23
A x B (interaction)	1	0.21	0.21	0.33
Within	423	267.54	0.63	

*P < .05, F = 3.84 or higher, df = 1

Table C-3. Analysis of Variance Summary Table for the Competency Provide for Safety Needs of Students by Sex and Enrollment in Vocational Agriculture/Agribusiness of the Respondents

Source of Variation	Degrees of Freedom	Sum of Squares	Mean Square	F Ratio
A (Sex)	1	4.65	4.65	6.99*
B (Enrollment in Vocational Agriculture/Agribusiness)	1	4.95	4.95	7.43*
A x B (interaction)	1	1.51	1.51	2.27
Within	421	280.06	0.67	

*P < .05, F = 3.84 or higher, df = 1

Table C-4. Analysis of Variance Summary Table for the Competency Orient Students to the FFA by Sex and Enrollment in Vocational Agriculture/Agribusiness of the Respondents

Source of Variation	Degrees of Freedom	Sum of Squares	Mean Square	F Ratio
A (Sex)	1	0.96	0.96	0.91
B (Enrollment in Vocational Agriculture/Agribusiness)	1	7.94	7.94	7.52*
A x B (interaction)	1	0.08	0.08	0.08
Within	371	391.90	1.06	

*P < .05, F = 3.84 or higher, df = 1

Table C-5. Analysis of Variance Summary Table for the Competency Prepare Students for Leadership Roles in the FFA by Sex and Enrollment in Vocational Agriculture/Agribusiness of the Respondents

Source of Variation	Degrees of Freedom	Sum of Squares	Mean Square	F Ratio
A (Sex)	1	3.73	3.73	3.85*
B (Enrollment in Vocational Agriculture/Agribusiness)	1	4.50	4.50	4.65*
A x B (interaction)	1	0.01	0.01	0.01
Within	367	355.25	0.97	

*P < .05, F = 3.84 or higher, df = 1

Table C-6. Analysis of Variance Summary Table for the Competency Assist Students in Conducting FFA Meetings by Sex and Enrollment in Vocational Agriculture/Agribusiness of the Respondents

Source of Variation	Degrees of Freedom	Sum of Squares	Mean Square	F Ratio
A (Sex)	1	1.08	1.08	1.24
B (Enrollment in Vocational Agriculture/Agribusiness)	1	4.11	4.11	4.73*
A x B (interaction)	1	0.03	0.03	0.04
Within	364	316.59	0.87	

*P < .05, F = 3.84 or higher, df = 1

Table C-7. Analysis of Variance Summary Table for the Competency Supervise Students in Advancing in FFA Membership by Sex and Enrollment in Vocational Agriculture/Agribusiness of the Respondents

Source of Variation	Degrees of Freedom	Sum of Squares	Mean Square	F Ratio
A (Sex)	1	1.71	1.71	1.89
B (Enrollment in Vocational Agriculture/Agribusiness)	1	7.35	7.35	8.10*
A x B (interaction)	1	0.15	0.15	0.17
Within	360	326.76	0.91	

*P < .05, F = 3.84 or higher, df = 1

Table C-8. Analysis of Variance Summary Table for the Competency Assist Students in Participating in Competitve Activities by Sex and Enrollment in Vocational Agriculture/Agribusiness of the Respondents

Source of Variation	Degrees of Freedom	Sum of Squares	Mean Square	F Ratio
A (Sex)	1	0.15	0.15	0.15
B (Enrollment in Vocational Agriculture/Agribusiness)	1	7.25	7.25	7.35*
A x B (interaction)	1	0.01	0.01	0.01
Within	370	365.21	0.99	

*P < .05, F = 3.84 or higher, df = 1

Table C-9. Analysis of Variance Summary Table for the Competency Supervise Students in the Conduct of Banquets by Sex and Enrollment in Vocational Agriculture/Agribusiness of the Respondents

Source of Variation	Degrees of Freedom	Sum of Squares	Mean Square	F Ratio
A (Sex)	1	0.96	0.96	0.82
B (Enrollment in Vocational Agriculture/Agribusiness)	1	5.15	5.15	4.38*
A x B (interaction)	1	0.00	0.00	0.00
Within	340	399.48	1.17	

*P < .05, F = 3.84 or higher, df = 1

Table C-10. Analysis of Variance Summary Table for the Competency Develop Training Plans by Sex and Enrollment in Vocational Agriculture/Agribusiness of the Respondents

Source of Variation	Degrees of Freedom	Sum of Squares	Mean Square	F Ratio
A (Sex)	1	4.02	4.02	4.17*
B (Enrollment in Vocational Agriculture/Agribusiness)	1	0.89	0.89	0.93
A x B (interaction)	1	1.70	1.70	1.76
Within	294	283.31	0.96	

*P < .05, F = 3.84 or higher, df = 1

Table C-11. Analysis of Variance Summary Table for the Competency Assist Students in Recordkeeping by Sex and Enrollment in Vocational Agriculture/Agribusiness of the Respondents

Source of Variation	Degrees of Freedom	Sum of Squares	Mean Square	F Ratio
A (Sex)	1	0.01	0.01	0.01
B (Enrollment in Vocational Agriculture/Agribusiness)	1	4.43	4.43	4.91*
A x B (interaction)	1	0.33	0.33	0.37
Within	365	329.56	0.90	

*P < .05, F = 3.84 or higher, df = 1

Table C-12. Analysis of Variance Summary Table for the Competency Organize an Adult Education Program by Sex and Enrollment in Vocational Agriculture/Agribusiness of the Respondents

Source of Variation	Degrees of Freedom	Sum of Squares	Mean Square	F Ratio
A (Sex)	1	7.65	7.65	5.77*
B (Enrollment in Vocational Agriculture/Agribusiness)	1	2.64	2.64	1.99
A x B (interaction)	1	1.49	1.49	1.13
Within	209	277.10	1.33	

*P < .05, F = 3.84 or higher, df = 1

Table D-1. Analysis of Variance Summary Table for the Competency Determine Student Needs by Sex and Membership in the FFA of the Respondents

Source of Variation	Degrees of Freedom	Sum of Squares	Mean Square	F Ratio
A (Sex)	1	1.96	1.96	3.85
B (Membership in the FFA)	1	0.30	0.30	0.59
A x B (interaction)	1	2.75	2.75	5.38*
Within	418	213.50	0.51	

*P < .05, F = 3.84 or higher, df = 1

Table D-2. Analysis of Variance Summary Table for the Competency Prepare Departmental Budgets by Sex and Membership in the FFA of the Respondents

Source of Variation	Degrees of Freedom	Sum of Squares	Mean Square	F Ratio
A (Sex)	1	13.54	13.54	15.45*
B (Membership in the FFA)	1	0.23	0.23	0.26
A x B (interaction)	1	1.62	1.62	1.85
Within	356	312.06	0.88	

*P < .05, F = 3.84 or higher, df = 1

Table D-3. Analysis of Variance Summary Table for the Competency Evaluate Student Performance by Sex and Membership in the FFA of the Respondents

Source of Variation	Degrees of Freedom	Sum of Squares	Mean Square	F Ratio
A (Sex)	1	1.04	1.04	2.15
B (Membership in the FFA)	1	1.05	1.05	2.18
A x B (interaction)	1	2.34	2.34	4.85*
Within	421	203.63	0.48	

*P < .05, F = 3.84 or higher, df = 1

Table D-4. Analysis of Variance Summary Table for the Competency Maintain Student Discipline by Sex and Membership in the FFA of the Respondents

Source of Variation	Degrees of Freedom	Sum of Squares	Mean Square	F Ratio
A (Sex)	1	10.62	10.62	16.79*
B (Membership in the FFA)	1	2.27	2.27	3,59
A x B (interaction)	1	0,97	0.97	1.54
Within	419	265.09	0.63	

*P < .05, F = 3.84 or higher, df = 1

Table D-5. Analysis of Variance Summary Table for the Competency Provide for Safety Needs of Students by Sex and Membership in the FFA of the Respondents

Source of Variation	Degrees of Freedom	Sum of Squares	Mean Square	F Ratio
A (Sex)	1	2.90	2.90	4.30*
B (Membership in the FFA)	1	2.12	2.12	3.15
A x B (interaction)	1	0.54	0.54	0.81
Within	417	281.15	0.67	

*P < .05, F = 3.84 or higher, df = 1

Table D-6. Analysis of Variance Summary Table for the Competency Orient Students to the FFA by Sex and Membership in the FFA of the Respondents

Source of Variation	Degrees of Freedom	Sum of Squares	Mean Square	F Ratio
A (Sex)	1	0.21	0.21	0.20
B (Membership in the FFA)	1	14.68	14.68	14.13*
A x B (interaction)	1	0.10	0.10	0.09
Within	368	382.35	1.04	

*P < .05, F = 3.84 or higher, df = 1

Table D-7. Analysis of Variance Summary Table for the Competency Prepare Students for Leadership Roles in the FFA by Sex and Membership in the FFA of the Respondents

Source of Variation	Degrees of Freedom	Sum of Squares	Mean Square	F Ratio
A (Sex)	1	1.95	1.95	2.06
B (Membership in the FFA)	1	10.08	10.08	10.63*
A x B (interaction)	1	0.04	0.04	0.05
Within	364	345.03	0.95	

*P < .05, F = 3.84 or higher, df = 1

Table D-8. Analysis of Variance Summary Table for the Competency Assist Students in Conducting an FFA Meeting by Sex and Membership in the FFA of the Respondents

Source of Variation	Degrees of Freedom	Sum of Squares	Mean Square	F Ratio
A (Sex)	1	0.80	0.80	0.93
B (Membership in the FFA)	1	6.24	6.24	7.26*
A x B (interaction)	1	0.12	0.12	0.13
Within	361	310.39	0.86	

*P < .05, F = 3.84 or higher, df = 1

Table D-9. Analysis of Variance Summary Table for the Competency Supervise Students in Advancing in FFA Membership by Sex and Membership in the FFA of the Respondents

Source of Variation	Degrees of Freedom	Sum of Squares	Mean Square	F Ratio
A (Sex)	1	1.47	1.47	1.64
B (Membership in the FFA)	1	10.75	10.75	12.05*
A x B (interaction)	1	0.02	0.02	0.03
Within	358	319.60	0.89	

*P < .05, F = 3.84 or higher, df = 1

Table D-10. Analysis of Variance Summary Table for the Competency Assist Students in Participating in Competitive Activities by Sex and Membership in the FFA of the Respondents

Source of Variation	Degrees of Freedom	Sum of Squares	Mean Square	F Ratio
A (Sex)	1	0.08	0.08	0.08
B (Membership in the FFA)	1	7.27	7.27	7.41*
A x B (interaction)	1	0.09	0.09	0.09
Within	367	360.33	0.98	

*P < .05, F = 3.84 or higher, df = 1

Table D-11. Analysis of Variance Summary Table for the Competency Assist Students in the Conduct of FFA Fund-Raising Activities by Sex and Membership in the FFA of the Respondents

Source of Variation	Degrees of Freedom	Sum of Squares	Mean Square	F Ratio
A (Sex)	1	0.70	0.70	0.72
B (Membership in the FFA)	1	6.58	6.58	6.81*
A x B (interaction)	1	0.01	0.01	0.01
Within	356	343.85	0.97	

*P < .05, F = 3.84 or higher, df = 1

Table D-12. Analysis of Variance Summary Table for the Competency Supervise Students in the Conduct of Banquets by Sex and Membership in the FFA of the Respondents

Source of Variation	Degrees of Freedom	Sum of Squares	Mean Square	F Ratio
A (Sex)	1	0.52	0.52	0.45
B (Membership in the FFA)	1	8.71	8.71	7.52*
A x B (interaction)	1	0.14	0.14	0.12
Within	340	393.44	1.16	

*P < .05, F = 3.84 or higher, df = 1

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